













**SELECTIONS FROM THE RECORDS OF THE  
BOMBAY GOVERNMENT.**

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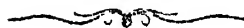
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**ANNUAL REPORT**

ON THE

**JAILS IN SIND,**

1864-65.



**Bombay:**

PRINTED FOR GOVERNMENT  
AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.

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1866.



# ANNUAL REPORT

ON THE

## JAILS IN SIND

FOR THE OFFICIAL YEAR 1864-1865.

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<sup>1</sup> of Government conveyed in the 3rd paragraph  
t<sup>7</sup>, dated the 8th of June 1865, the Report on  
mitted in a separate form through the C

In .

	Males.	Females.	Total.	In 1863-64.		
				Males.	Females.	Total.
Number remaining in Jail on the last day of the previous year .....	1,421	26	1,447			
Number admitted into the Jail during the year .....	3,547	81	3,628	1,689	25	1,714
Total, ....	4,968	107	5,075	4,009	79	4,088
				5,698	104	5,802

5. There has consequently been a decrease of 727 prisoners in confinement in the Jails during the last year.

6. In the different Lock-ups there were 150 prisoners in confinement and 465 were transferred from the Jail to the Comerkote, so that the total criminal population in the Province was 18,798.

727 prisoners in

to prisoners in

9. The only remarkable feature in the number of deaths as compared with the previous year is the circumstance that in 1863-64 a fatal epidemic of cholera prevailed for some months in the Kurrachee Jail.

10. The number of prisoners admitted during the year ending 1864-65, is accounted for in the following particulars given below :—

	1864-65.	
Committed to Jail by order of the Magisterial authorities of the district .....	2,990	
„ by order of the Civil and Revenue authorities of the districts .....	297	
„ under sentence of Courts Martial .....	5	
„ by the Ducoity Departments .....	....	
„ under special orders of Government .....	....	
Recaptured after escape in previous years .....	...	
Transferred from one district to another for trial .....	....	
„ for confinement .....	....	
„ for banishment .....	....	
„ for transportation .....	83	
„ for benefit of health .....	....	
„ for release .....	....	...
„ for special reasons .....	....	...
„ after recapture .....	....	..
„ from sub-division Lock-ups to Sudder Jails .....	....	..
„ while on the way from one district to another .....	253	....
Total ....	3,628	4,088

11. Missions into Jail were 460 less during the present year than during the preceding year.

12. The details of the 862 prisoners transferred during the year are given below :—



	1864-65.	1863-64.
and from one district to another for trial . . . .	770	288
for confinement . . . . .	84	130
for banishment . . . . .	2	2
for transportation . . . . .	6	98
for benefit of health . . . . .		
for release . . . . .		
after recapture . . . . .		
to lunatic asylums . . . . .		
from sub-division Lock-ups to Sudder Jails . . . . .		
Jails while in transit from one district to another . . . . .		
Total . . . .	862	518

13. The number of prisoners acquitted or otherwise released is shown in the annexed table :—

	1864-65.	1863-64.
After trial by the Magisterial authorities of the district . . . . .	754	524
„ by the Session Judge . . . . .	136	127
„ by the Sudder Court . . . . .	1	6
Released by order of Government . . . . .	4	1,167
Released on expiry of sentence . . . . .	1,694	1,541
„ on payment of debts, &c. . . . .	287	2
„ for good conduct . . . . .		6
„ for extreme sickness . . . . .		
Total . . . .	2,876	

14. Of the 2,876 releases, 891 were acquittals, being more than during the previous year.

15. The large number of releases on account occurred from the Kurrachee Jail during the epidemic between January and April 1864, under circumstances reported to Government at the time, and regarding

ment have recorded their views in Resol  
September-1864.

16. Out of a daily average number of prisoners, 1,499, there were 72 deaths against 2, an average daily strength of 1876 du  
Deaths. previous year. This marked decrease is due, as already st  
severe epidemic at Kurrachee during 1863-64, and is a  
exceptional.

17. Of the 72 prisoners who died, one was a fema  
maining 71 males.

18. The ratio per cent. of deaths to average strength  
against 11.94 in the previous year, and the percentage of de  
males to the male population or the actual number in confin  
was 1.63 and of females .93.

19. The following table gives information under this  
Hospital statistics. in a detailed form in accordance with  
supplied in Doctor Mouat's last report

	In 1861-65.	
Aggregate number of prisoners of all classes sick and well in custody.....	547,146	
Daily average number of prisoners .....	1,499	
Aggregate number of prisoners admitted into the Jail hospitals .....	1,703	3,76
Number discharged cured .....	1,593	3,396
Number who died .....	72	224
Number remaining under treatment on the 30th April.	38	51
Ratio per cent. of aggregate in hospital to strength..	113.61	200.85
" " of discharged to treated .....	93.54	89.97
" " of deaths to aggregate in hospital ..	4.23	5.94
" " of deaths to average strength .....	4.8	11.94
Prison population including males and females ....	5,075	5,802
Percentage of deaths of both sexes to prison population .....	1.42	3.86
Male prisoners in Jails .....	4,968	698
Deaths of male prisoners.....	71	5,224
Percentage of deaths to the male prison population..	1.63	3.86
Female prisoners in Jails .....	107	104
Deaths of female prisoners .....	1	....
Ratio of deaths of females to female prison population.	.93	....

treated, 1,593 were discharged cured, and 38  
 on the last day of the year in the three Jails,  
 more than 12 sick to each hospital.

admissions into hos-  
 pitals according to the  
 classification of the Re-  
 gular.

21. The admissions into and deaths in  
 the Jail hospitals are given below, under each  
 class of disease :—

	In 1864-65.			In 1863-64.		
	Treated in Hospital.	Deaths.	Ratio per cent. of treated to deaths.	Treated in Hospital.	Deaths.	Ratio per cent. of treated to deaths.
<b>CLASS I.</b>						
<i>Zymotic diseases, viz. :—</i>						
Smallpox .....	1,237	50	4.04	2,326	168	7.22
Scarlet fever .....		..			..	
Dysentery .....		..			..	
Total ...	1,237	50	4.04	2,326	168	7.22
<b>CLASS II.</b>						
<i>Local diseases, viz. :—</i>						
Pharyngitis .....	5	1	80	5	2	100
Stomatitis .....		3			3	
Total ...	5	4	80	5	5	100
<b>CLASS III.</b>						
<i>Local diseases, viz. :—</i>						
Diseases of the Nervous system ..	347	..	4.03	741	..	3.78
" of the Organs of circulation ..		..			..	
" of the Respiratory organs ..		11			10	
" of the Digestive organs ..		2			5	
" of the Urinary organs ..		..			..	
" of the Organs of generation ..		..			..	
" of the Organs of locomotion ..		1			..	
" of the Integumentary organs ..		..			13	
Total ...	347	14	4.03	741	28	3.78

	In 1864-65.					
	Treated in Hospital.	Deaths.	Ratio per cent. of treated to deaths.	Treated in Hospital.	Deaths.	
<b>CLASS IV.</b>						
<i>Developmental diseases, viz. :—</i>						
Diseases of Children .....	10	..	10	29	..	10
„ of Adults .....		..			..	
„ of Old people .....		..			..	
„ of Nutrition .....		1			1	
Total .....	10	1	10	29	10	3
<b>CLASS V.</b>						
<i>Violent diseases, viz. :—</i>						
Accident .....	43	3	6.98	546	13	16.1
Suicide .....		..			..	
Execution .....		..			..	
Other violent causes, not classed .		..			..	
Sudden deaths, causes not ascertained .....		..			..	
Total .....	43	3	6.98	546	13	16.1
<b>TOTALS.</b>						
All causes .....	1,642	72	4.38	3,647	224	6.14
Specified causes .....	1,642	72	4.38	3,647	224	6.14

22. With reference to the 14th paragraph of the Resolution of Government No. 2374 of the 22nd of July 1865, in which the classing of suicides and executions under the head of violent diseases is pointed out to be inappropriate, I would respectfully explain that suicides and executions are regarded as diseases only in those rare but possible cases in which they come under treatment.

23. In the table in paragraph 8, it will be observed that there were 11 executions, and that they are there entered as one of the modes of release or disposal, yet in the preceding table which gives the hospital statistics or admissions and deaths from different classes

ons have been excluded, because they were  
ent. Their inclusion in this table in the previous  
port, though in accordance with the practice in Bengal, was  
ns.

This classification, however, is adopted in the forms of  
pital Returns issued from the Medical Department, and by  
Mout in those which are annexed to his annual reports,  
uld respectfully submit that, under the explanation above  
should be retained.

25. The deaths and ratios of deaths are  
exhibited in the subjoined table according to  
religion :—

	In 1864-65.			In 1863-64.		
	Daily average strength of the respective classes named.	Deaths.	Ratio of deaths to average strength as per column 1.	Daily average strength of the respective classes named.	Deaths.	Ratio of deaths to average strength as per column 4.
	1	2	3	4	5	6
Hindoos .....	190	6	3.16	228	9	3.95
Mussulmans .....	1,292	65	5.03	1,631	213	13.06
Christians .....	8	..	....	5	..	....
Other denominations..	9	1	11.11	12	2	16.67
Total..	1,499	72	4.8	1,876	224	11.94

26. The rates of mortality during both years were greatest among Mussulmans, excluding those entered under the term "other denominations," whose numbers are too small for any fair comparison.

27. The deaths with respect to sex are given in the following table:—

Sex.	In 1864-65.			In 1863-64.		
	Daily average strength of males and females in custody.	Deaths.	Ratio per cent of deaths to daily average strength respectively of males and females in custody.	Daily average strength of males and females in custody.	Deaths.	Ratio.
Males .....	1,471	71	4.83	1,847	224	12.13
Females .....	28	1	3.57	29	..	..
Total....	1,499	72	4.8	1,876	224	12.0

28. The rates of mortality for both sexes were 4.8 for under report, and 11.94 for the preceding one; the increase in the latter is assignable to causes already specified; the number of females was, however, so small as scarcely to admit of any fair comparative results.

29. The period after date of imprisonment at which death occurred is given in the following annexed table:—

Period of confinement at time of death.

[Table

	In 1864-65.			1863-64.		
	Daily average strength of Term and Life Prisoners in custody.	Deaths.	Ratio per cent. of deaths to daily average strength of Term and Life Prisoners in custody.	Daily average strength of Term and Life Prisoners in custody.	Deaths.	Ratio per cent. of deaths to daily average strength of Term and Life Prisoners in custody.
<i>Term Prisoners.</i>						
imprisonment for 3 months and under .....	1,186	11	·94	1,863	24	1·29
„ 6 months and above 3 months .....		20	1·34		38	2·04
„ 6 months and up to 1 year .....		10	·67		32	1·72
„ 1 year and up to 2 years .....		23	1·55		77	4·13
„ 2 years and up to 5 years .....		3	·20		40	2·14
„ 5 years and up to 10 years .....		1	·07		11	·59
„ 10 years .....		1	·07		2	·11
Total....	1,488	72	4·84	1,863	224	12·02
<i>Life Prisoners.</i>						
imprisonment for 6 months and .....	11	..	....	13	..	....
„ 6 months and up to 1 year .....		..	....		..	....
„ 1 year and up to 2 years .....		..	....		..	....
„ 2 years and up to 5 years .....		..	....		..	....
„ 5 years and up to 10 years .....		..	....		..	....
„ 10 years and up to 20 years .....		..	....		..	....
„ 20 years and up to 30 years .....		..	....		..	....
„ 30 years .....		..	....		..	....
Total....	11	..	....	13	..	....
Grand Total....	1,499	72	4·8	1,876	224	11·94

30. Excluding those prisoners whose terms of imprisonment varied from two years and above, whose numbers are too small for comparison, the lowest rate of mortality occurred among those who had been in confinement above 6 months and up to 1 year, the highest among those between 1 and 2 years.

31. There were no deaths among life prisoners in the year under report.

32. The deaths and rates of mortality, labouring, and untried p.  
Occupation in Jail. the following table :—

	In 1861-65.			In 1863-		
	Daily average strength of each class in custody.	Deaths.	Ratio of deaths to average strength of each class in custody.	Daily average strength of each class in custody.	Deaths.	
<i>Labouring Prisoners.</i>						
In-door labourers .....	731	50	6.84	582	60	
Out-door labourers .....	637	15	2.35	966	164	1
Total ....	1,368	65	4.75	1,548	224	14
<i>Non-Labouring Prisoners.</i>						
Sentenced without labour and civil prisoners .....	28	5	17.86	39	..	
Inefficient from age or sickness and convalescents excused from labour .....	73	..	....	17	..	
Total ....	101	5	4.76	56	..	...
<i>Untried Prisoners.</i>						
In confinement without work.	30	2	6.66	272	..	....
Grand Total ....	1,499	72	4.8	1876	224	11.94

33. Of in-door and out-door labourers, the highest rates of mortality occurred among the former during the period under report, and among the latter in the preceding year ; but the rates in respect to the non-labouring and civil prisoners for the present year were in excess of either of the former.

34. The out-door labourers here referred to are merely those employed in the gardens and in the vicinity of the Jail, many of the former being convalescent and weakly prisoners, and do not include those in Public Works gangs.



35. The death rates among prisoners employed on the different kinds of labour are given below :—

DESCRIPTION OF EMPLOYMENT.	In 1864-65.			In 1863-64.		
	Daily average strength of each class in custody.	Deaths.	Ratio of deaths to strength in column 1.	Daily average strength of each class in custody.	Deaths.	Ratio of deaths to strength in column 4.
<i>In-door Labourers.</i>						
Employed in manufactures .....	298	10	3.36	322	28	8.70
"    as Jail servant. ....	135	2	1.48	185	19	10.27
"    in miscellaneous works.	116	11	9.48			
"    as hospital attendants ..	11	..	..			
"    as burkundazes .....	..	..	..	75	13	17.33
"    in repairing Jails .....	46	..	..			
"    on light labour .....	125	27	21.6			
Total of in-door labourers.	731	50	6.84	582	60	10.3
<i>Out-door Labourers.</i>						
Employed in making bricks .....	10	..	..	928	163	17.56
"    in miscellaneous works ..	481	6	1.25			
"    in buildings .....	..	..	..			
"    in digging kunkur .....	..	..	..	38	1	2.63
"    on the roads .....	112	8	7.14			
"    in the Jail garden .....	34	1	2.94			
Total of out-door labourers.	637	15	2.35	966	164	16.98
Total of labouring prisoners.	1,368	65	4.75	1,548	224	14.47
Sentenced without labour and civil prisoners .....	28	..	..	39	..	..
Inefficient from age, convalescents and others excused from labour on account of physical debility ..	73	5	6.76	17	..	..
Prisoners under trial .....	30	2	6.67	272	..	..
Grand Total ....	1,499	72	4.8	1,876	224	11.94

36. From the above it will be seen that the highest rates of mortality occurred during prisoners employed on light labour; this is explained that prisoners selected for this kind of labour are the weak, convalescent; and during the past year among those engaged in cellaneous work the healthiest were those employed as Jail

37. Of out-door labourers, those employed on the road had the highest rates of mortality, and excluding the small number in the first heading, those engaged on miscellaneous works had the lowest rates.

38. The mortality among prisoners under trial is as high as that which may be called exceptional among the aged, convalescent, and debilitated.

39. The sentences of those who died, and the proportion of deaths to the different terms of the sentences, are exhibited in the annexed table:—

	In 1864-65.			In 1863-64.		
	Daily average of Prisoners sentenced for the periods named.	Deaths.	Ratio per cent. of deaths to daily average strength as per column 1.	Daily average of Prisoners sentenced for the periods named.	Deaths.	Ratio per cent. of deaths to daily average strength as per column 1.
<b>TERM PRISONERS.</b>						
<i>Sentenced for</i>						
6 months and under . . . . .	394	18	4.57	496	94	18.95
Above 6 months and up to 1 year.	525	15	2.86	431	57	13.23
„ 1 year and up to 2 years..	313	28	8.16	375	39	10.4
„ 2 years and up to 5 years..	124	7	5.64	187	23	12.3
„ 5 years and up to 10 years.	37	1	2.7	53	6	11.32
„ 10 years . . . . .	3	1	33.3	5	3	60.
<b>Total . . .</b>	<b>1,426</b>	<b>70</b>	<b>4.9</b>	<b>1,547</b>	<b>222</b>	<b>14.35</b>
Till security is furnished . . . . .	15	..	....	26	..	....
As civil prisoners . . . . .	17	..	....	18	..	....
As criminal lunatics . . . . .	1	..	....	..	..	....
<i>Life Prisoners.</i>						
Sentenced for life . . . . .	10	..	....	13	2	15.38
Under trial . . . . .	30	2	6.66	272	..	....
<b>Total . . .</b>	<b>1,499</b>	<b>72</b>	<b>4.8</b>	<b>1,876</b>	<b>224</b>	<b>11.94</b>

rates of mortality occurred during the two sentences to above 10 years, but their numbers are not fair comparison.

All the rates in 1863-64 are excessive, owing to the fatal attack at Kurrachee. During the past year the lowest rates among prisoners under sentences above 5 years and up to and above 6 months and up to 1 year. The anterior and late periods show a comparatively high death rate.

In the annexed table are given the classes of criminals among whom death occurred in the largest proportions :—

	In 1864-65.				In 1863-64.			
	1	2	3	4	5	6	7	8
CLASSES.	Daily average strength of each class in custody.	Deaths.	Ratio per cent. of deaths to average strength in column 1.	Ratio per cent. of deaths to total casualties.	Daily average strength of each class in custody.	Deaths.	Ratio per cent. of deaths to average strength in column 6.	Ratio per cent. of deaths to total casualties.
Thieves .....	479	37	7.72	51.39	708	80	11.30	35.71
Cattle stealers .....	271	15	5.54	20.83	369	33	8.94	14.73
Burglars .....	292	6	2.05	8.33	367	23	6.27	10.27
Total .....	1,042	58	5.57	80.56	1,444	136	9.42	60.71

43. This table supplies the information which was wanting in my last Annual Report, \* viz. the strength of each class among whom the largest number of deaths took place and the percentage of deaths in each class.

\* Vide paragraphs 17 and 19 of Resolution of Government No. 2374 of 1st October 1864.

44. The largest proportion of deaths occurred during both the official years as given in the table.

45. This table shows the occupation prior to imprisonment of those among whom there was the proportion of deaths:—

	In 1864-65.				In 1863-64.			Ratio of deaths to strength in column 5.
	1	2	3	4	5	6	7	
	Daily average strength of each class in custody.	Deaths.	Ratio of deaths to strength in column 1.	Ratio of deaths to total casualties.	Daily average strength of each class in custody.	Deaths.	Ratio of deaths to strength in column 5.	Ratio of deaths to strength in column 5.
Agriculturists.....	710	51	7.18	70.83	1,132	116	10.2	
Labourers ... ..	457	8	1.75	11.11	671	86	12.8	
Total ....	1,167	59	5.06	81.94	1,803	202	11.2	90.18

46. During the past year, agriculturists have died in the largest proportions, coolies and labouring servants being next on the list; but during the previous year, it appears that the ratio of deaths in each class was highest among labourers, although the ratio of deaths to total casualties in the Jail was highest among the agriculturists.

47. The castes and sects which furnished the largest proportion of deaths are given in the following table:—

Castes and sects.

PLACES AND SECTS.	In 1864-65.				In 1863-64.			
	1	2	3	4	5	6	7	8
	Daily average strength of.	Deaths.	Ratio of deaths to strength in column 1.	Ratio of deaths to total casualties.	Daily average strength of.	Deaths.	Ratio of deaths to strength in column 5.	Ratio of deaths to total casualties.
<i>Mussulman.</i>								
Muslimans.....	532	18	3.38	25	The detail for this year was not supplied.			
Seeds.....	176	17	9.66	23.61				
.....	293	15	5.12	20.83				
Desert country Mussul-	101	6	5.94	8.33				
askhellies .....	46	3	6.52	4.16				
Total....	1,148	59	5.14	81.94	..	..	..	..
<i>Hindoo.</i>								
Lohana .....	89	4	4.49	5.55	..	..	..	..

48. The largest number of deaths occurred among the different sects of Mussulmans, Seedeers supplying the larger proportion in each class, and Lohanas among the Hindoo castes.

49. The ages at which the larger proportion of deaths took place are given below—

Ages.

	In 1864-65.				
	Daily average of Prisoners of the ages particularized.	Deaths.	Ratio per cent. of deaths to average strength as per column 1.	Daily average of Prisoners of the ages particularized.	Deaths.
Under 20 years of age . . . .	127	6	4.72	250	..
From 20 to 30 years . . . . .	664	29	4.37	787	133
„ 30 to 40 years . . . . .	504	27	5.36	473	62 13
„ 40 to 50 years . . . .	171	6	3.51	323	11
„ 50 to 60 years . . . . .	25	3	12.0	35	13
„ 60 to 70 years . . . . .	8	1	12.5	5	3
„ 70 to 80 years . . . . .	....	..	....	3	2 66.66
Above 80 years . . . . .	....	..	....	....	..
Total . . . .	1,499	72	4.8	1,876	224 11.94

50. Excluding those above 50 years of age, whose numbers are comparatively very small, the highest rates of mortality during the past year occurred in prisoners from 30 to 40 years of age, and in the previous year from 20 to 30 years.

51. The deaths are arranged below according to the period of sentence unexpired at the time of death—

	In 1864-65.	In 1863-64.
1 and under.....	1	No information was supplied.
2 month and up to 6 months.....	37	
3 months and up to 1 year .....	18	
4 year and up to 5 years .....	12	
5 years and up to 10 years .....	2	
6 10 years and up to 15 years .....	....	
7 e 15 years .....	....	
	70	

The deaths and rates of mortality among prisoners of the district in which they are confined, and among those of other districts, are given below :—

	In 1864-65.			In 1863-64.		
	Daily average strength of Prisoners of the classes named.	Deaths.	Ratio per cent. of deaths to daily average strength in column 1.	Daily average strength of Prisoners of the classes named.	Deaths.	Ratio per cent. of deaths to daily average strength in column 4.
Prisoners of the districts..	1,440	70	4.86	1,605	196	12.21
„ of other districts.	59	2	3.39	271	28	10.33
Total .....	1,499	72	4.8	1,876	224	11.94

53. The number of casualties, as well as were greatest among prisoners of the district imprisoned during both years. Transfers from one to another did not appear to have enhanced the rates of mortality.

54. It would appear from the following table that the amount of sickness occurred in the season of April, May, October and December the year 1864-65, and during 1863-64 in the months of February, March and May. The rates of sickness generally out this year are high and exceptional, and contrast unfavourably with those of the year under report.

55. The rates of mortality were in 1864-65 highest in January, March, April and June; and during February, March and April in the previous year.

56. It is satisfactory to note that during neither of the years under comparison did cholera make its appearance in the Sind Jails.

57. The cases of dysentery were comparatively so few in the two years as scarcely to be said to preponderate during any particular month. Of diarrhoea the rates of mortality were highest in April during 1864-65, and in January, February and March during the previous year.

58. Fevers were most fatal in June, January and April during 1864-65, and in February, March and April during the previous year, during which months the epidemic already alluded to was at its height.

59. All other diseases were most fatal in November and January in 1864-65, and in December, February and March during the previous year.

60. On a review of these data it would appear that the most fatal months were January, March and April during the year under report, and February, March and April during 1863-64.



MONTHS.	Daily average strength in cups today.		h. cs		G		cured.		strength		y		ca	inc	m	a	
	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.
May .....	1,520	1,766	237	404	144	290	15-59	22-88	60-76	71-78	1-68	1-45					
June .....	1,519	1,856	69	268	110	237	4-54	14-44	159-42	88-43	10-14	1-12					
July .....	1,658	1,845	96	265	87	271	5-79	14-36	90-62	102-26	5-21	1-89					
August.....	1,541	1,894	114	305	111	276	7-4	16-1	97-37	90-49	4-39	2-3					
September .....	1,660	1,894	126	280	118	269	7-59	14-78	93-65	96-07	2-38	0-71					
October .....	1,698	1,843	195	267	212	298	11-48	14-49	108-72	111-61	1-54	2-25					
November .....	1,554	1,933	142	262	148	275	9-14	13-55	104-22	104-96	3-52	1-91					
December .....	1,470	1,965	152	236	143	216	10-24	14-55	94-08	91-53	3-29	5-08					
January .....	1,436	2,015	130	333	118	169	9-05	16-53	90-77	50-75	6-92	4-5					
February.....	1,410	1,992	94	436	98	263	6-66	21-89	104-27	60-32	4-26	9-17					
March .....	1,306	1,931	121	503	107	547	9-26	26-05	88-43	108-75	5-79	19-68					
April .....	1,216	1,578	227	209	197	279	18-77	13-24	86-78	133-49	6-6	11-48					
Total.....	17,988	22,512	1,703	3,768	1,593	3,390	9-47	16-74	93-54	89-97	4-23	5-94					
Mean .....	1,499	1,876	142	314.	133	283	9-47	16-74	93-54	89-97	4-23	5-94					

## DEATHS FROM

MONTHS.	Cholera.		Dysentery.		Diarrhoea.		Fever.		Phthisis.	
	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.	1863-64.
	Deaths. Ratio per cent. of deaths to average strength in Jail.	Deaths. Ratio per cent. of deaths to average strength in Jail.	Deaths. Ratio per cent. of deaths to average strength in Jail.	Deaths. Ratio per cent. of deaths to average strength in Jail.	Deaths. Ratio per cent. of deaths to average strength in Jail.	Deaths. Ratio per cent. of deaths to average strength in Jail.	Deaths. Ratio per cent. of deaths to average strength in Jail.	Deaths. Ratio per cent. of deaths to average strength in Jail.	Deaths. Ratio per cent. of deaths to average strength in Jail.	Deaths. Ratio per cent. of deaths to average strength in Jail.
May.....	..	..	2	0.13	1	0.06	..	1	0.07	..
June .....	..	..	..	..	..	..	..	5	0.33	..
July.....	..	..	..	..	..	..	..	2	0.12	..
August.....	..	..	..	..	..	..	..	3	0.19	..
September .....	..	..	..	..	..	..	..	1	0.06	..
October .....	..	..	..	..	..	..	..	1	0.06	..
November .....	..	..	1	0.06	..	..	..	1	0.06	..
December .....	..	..	..	..	..	..	..	1	0.06	..
January .....	..	..	..	..	..	..	..	1	0.07	..
February .....	..	..	1	0.07	2	0.1	..	4	0.28	..
March .....	..	..	..	..	..	..	..	23	1.15	..
April .....	..	..	..	..	..	..	..	66	3.42	..
Total.....	..	..	4	0.06	5	0.06	7.07	7	0.57	..
Mean .....	..	..	..	0.06	..	1.0	..	23	1.0	..
	..	..	..	0.06	..	..	..	..	..	..

Total.....

Mean .....

MONTHS.	All other Diseases.				Accidental.				Suicidal.				Other Causes.			
	1864-65.		1863-64.		1864-65.		1863-64.		1864-65.		1863-64.		1864-65.			
	Deaths.	Ratio per cent. of deaths to average strength in Jail.	Deaths.	Ratio per cent. of deaths to average strength in Jail.	Deaths.	Ratio per cent. of deaths to average strength in Jail.	Deaths.	Ratio per cent. of deaths to average strength in Jail.	Deaths.	Ratio per cent. of deaths to average strength in Jail.	Deaths.	Ratio per cent. of deaths to average strength in Jail.	Deaths.	Ratio per cent. of deaths to average strength in Jail.		
May.....	1	0·07	1	0·06	..	..	..	..	..	..	..	..	4	0·26	6	0·34
June.....	1	0·07	2	0·1	..	..	..	..	..	..	..	..	7	0·46	3	0·16
July.....	1	0·06	3	0·16	0·12	..	..	..	..	..	..	..	5	0·3	5	0·27
August.....	1	0·06	2	0·1	0·06	..	..	..	..	..	..	..	5	0·32	7	0·37
September ..	1	0·06	..	..	..	..	..	..	..	..	..	..	3	0·18	2	0·1
October .....	..	..	3	0·16	..	..	..	..	..	..	..	..	3	0·18	6	0·32
November .....	3	0·19	2	0·1	..	..	..	..	..	..	..	..	5	0·32	5	0·26
December .....	1	0·7	4	0·2	..	..	..	..	..	..	..	..	5	0·34	12	0·61
January .....	3	0·21	3	0·15	..	..	..	..	..	..	..	..	9	0·63	15	0·74
February .....	2	0·14	8	0·4	..	..	..	..	..	..	..	..	4	0·28	40	2·
March .....	2	0·15	17	0·88	..	..	..	..	..	..	..	..	7	0·54	99	5·13
April .....	3	0·25	2	0·12	..	..	..	..	..	..	..	..	15	1·23	24	1·52
Total....	19	0·1	47	0·2	3	0·02	13	0·06	..	..	..	..	72	0·4	224	1·
Mean .....	..	1·27	..	2·5	..	0·2	..	0·69	..	..	..	..	..	4·8	..	11·94

## 61. The diseases which were the most

Specific causes of the deaths from all other causes given below—

DISEASES. *	In 1864-65		In 1863-64.		Increase or Decrease in 1864-65 as compared with 1863-64.		Average Mortality during the 2 years pre- ceding 1864-65.	Increase or Decrease in 1864-65 as compared with the average of the 2 preceding years.		In 1864-65.	c
	Deaths.	Ratio per cent. of deaths to total daily average strength in Jail.	Deaths.	Ratio per cent. of deaths to total daily average strength in Jail.	Increase.	Decrease.		Increase.	Decrease.		
* Dysentery . . . .	1	0 27	10	0 53	0 26	0 41	..	0 11	5 51	4	
Diarrhœa . . . . .	13	0 87	23	1 21	0 37	0 96	..	0 09	13 1		
Fever . . . . .	30	2 1	128	6 82	4 82	1 1	2 1	41 1			
Phthisis . . . .	3	0 2	3	0 16	0 01	0 17	0 03	..	4		
Total . . . .	50	3 33	161	8 75	5 12	5 51	2 21	69 14	73 1		
All other causes . .	19	1 26	47	2 5	1 21	1 92	0 66	26 39	20 99		
Other causes, acci- dental, suicidal, old age and decay. }	3	0 2	13	0 69	0 49	0 35	0 15	4 17	5 8		
Grand Total. .	72	4 8	224	11 94	7 14	7 81	3 01	100 00	100 00		

62. There has been a marked decrease of mortality from dysentery, diarrhœa and fever; in the case of the latter the decrease is

causes as already explained, but in the two years may be regarded as an index of improved health—doubt, to closer attention to sanitary measures.

The proportion of deaths from cholera and from ordinary diseases are merely recorded for the sake of comparison in the table below.

It would have been satisfactory had it been possible to have a comparison for the last ten years, but the data for three years only are available.

Other Causes.	Deaths	Ratio of deaths by		Total.
		cholera	ordinary diseases	
Accidental	862 .....	..	3.67	3.67
	863-64 .....	..	11.94	11.94
Average of the above 2 years .....		..	7.8	7.8
In 1864-65 .....		..	4.8	4.8
Decrease .....		..	3.	3.

65. In the two Jails entered in the table below, the deaths were below 6 per cent. and also below the average of the two preceding years. The data for two years only are available, but year by year this defect will be lessened until the decennial period is reached.

Jails in which the deaths were below 6 per cent. and also below the average of the last two years

JAILS.	Mortality in 1864-65.			Average mortality during the 2 years preceding 1864-65.			In mortality by ordinary diseases.		In n by c
	By ordinary diseases.	By cholera.	Total.	By ordinary diseases.	By cholera.	Total.	Increase.	Decrease.	
									h
Kurrachee . . . . .	3.71	..	3.71	11.52	..	11.52	..	7.81	..
Shikarpoor. . . . .	3.86	..	3.86	4.34	..	4.34	..	0.48	..

66. In none of the Jails was the mortality below 6 per cent. but in excess of the previous two years, nor was it above 6 per cent. but below the average of the previous two years.

67. At Hydrabad alone were the deaths above 6 per cent. and above the average of previous two years, as shown in the following table:—

JAIL.	Mortality in 1864-65.			Average mortality during the 2 years preceding 1864-65.			Difference in 1864-65.			
	By ordinary diseases.	By cholera.	Total.	By ordinary diseases.	By cholera.	Total.	In mortality by ordinary diseases.		In mortality by cholera.	
							Increase.	Decrease.	Increase.	Decrease.
Hydrabad .....	6.81	..	6.81	4.11	..	4.11	2.70	..	..	2.70

68. The increase at Hydrabad has been 2.70 per cent., entirely due to ordinary diseases.

69. Although this information has been included in a former table, it is here separately tabulated for convenience of comparison in future years :—

JAILS.	Mortality by ordinary diseases in 1864-65.	Average mortality by ordinary diseases during the 2 years preceding 1864-65.	Decrease in 1864-65.
.....	3·71	11·52	7·81
for .....	3·86	4·34	0·48

70. The decrease amounts to 7·81 at Kurrachee, and to 0·48 at Shikarpoor. At Hyderabad alone was there an increase of mortality in ordinary diseases, as already shown in a preceding table.

71. The rates of mortality to average strength are given below, and the most unhealthy Jail is placed first on the list :—

JAILS.	Mortality in 1864-65.						Average mortality during the 2 years preceding 1864-65.			Difference between 1864-65 and the preceding biennial averages.					
	Deaths from			Ratio of deaths.			Ratio of deaths.			In ratio of mortality by ordinary diseases.		In ratio of mortality by cholera.		Actual increase or decrease.	
	Daily average strength.	Ordinary diseases.		By ordinary diseases.	By cholera.		By ordinary diseases.	By cholera.		Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.
			Total.			Total.			Total.						
Hydrabad..	499	34	34	6·81	..	6·81	4·11	..	4·11	2·70	..	..	..	2·70	..
Shikarpoor..	596	23	23	3·86	..	3·86	4·34	..	4·34	..	0·48	..	..	..	0·48
Kurrachee..	404	15	15	3·71	..	3·71	11·52	..	11·52	..	7·81	..	..	..	7·81

72. The only increase took place at H

73. The Jail population includes the prisoners.

Rates of mortality the close of the preceding year as well as the rates calculated on the prison population admitted during the year, and the mortality have been calculated on numbers, and are shown separately for both sexes in the table :—

	Remaining in Jail on the last day of 1863-64.			Admitted during 1864-65.			Total.			Deaths.			Rate.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
Kurrachee.	305		305	92	21	113	1,228	21	1,219	15		15	1.22
Hydrabad.	607	11	618	1,895	37	1,932	2,502	18	2,550	33	1	34	1.3
Shikarpoor.	509	15	524	729	23	752	1,238	38	1,276	23		23	1.8
Total.	1,421	26	1,447	3,517	81	3,628	4,968	107	5,075	71	1	72	1.2
Mean Average.	473.67	8.66	482.33	1,182.33	27	1,209.33	1,656	35.66	1,691.66	23.67	0.33	24	1.43
													0.93
													1.42

74. This mode of calculation, adopted by the Inspector General of Jails, Lower Provinces, gives the death rate possibly in too favourable a light, but taken in connection with the following figures perhaps a truer conception of the real average mortality may be gained in this way than by calculating the rates on the average strength, as is usually done, and as has been shown elsewhere.

Comparative statement of mortality calculated on the average and actual prison population.

75. In this table are shown the death rates on the average and actual strength together with the mean rates :—



[illegible]

An analysis of the above table gives the following results:—

Large number of males in custody .....	1,471
Deaths .....	71
Ratio per cent. ....	4.83
Daily average number of females in custody .....	28
Deaths .....	1
Ratio per cent. ....	3.57
Daily average of both sexes .....	1,499
Deaths .....	72
Ratio per cent. ....	4.8
Prison population of 1864-65, males .....	4,968
"      "      "      females .....	107
Deaths of males .....	71
"      of females .....	1
Ratio per cent. of mortality among males .....	1.43
"      "      "      "      females .....	0.93
Total prison population male and female .....	5,075
Total deaths .....	72
Ratio per cent. of mortality .....	1.42
Mean rate of deaths among males .....	3.13
"      "      "      females .....	2.25
Mean rate of the two combined .....	3.11

77. From the above it will be seen that deaths calculated on the average strength was 4·6, population or actual strength 1·42. The mean rate was probably represents a fair and reliable average.

78. The number of escapes and recaptures as compared with the previous year is given below :—

YEARS.	Daily average strength.	Number of escapes.	Ratio of escapes to strength.	Number of recaptures.	Ratio of recaptures to escapes.	Amount of reward paid for the recaptures.	A.
1864-65 .....	1,499	14	·93	4	28·6	....	....
1863-64 .....	1,876	12	·64	..	..	....	....

79. The escapes were rather more numerous during the year 1864-65. Of the 14, 1 took place from within Jail walls, 4 from outside the Jail at Kurrachee, 6 from without also, at Hyderabad, and 2 from Shiraz. 1 was effected from the Hyderabad Jail Hospital.

80. The number remaining at large at the close of the year under report is here shown :—

	Males.	Females.	Total.
Remaining uncaptured at the close of last year .....	12	..	12
Add escaped this year .....	14	..	14
	26	..	26
Deduct recaptured of escapes of former years .....	2	..	2
	24	..	24
„ „ of this year's escapes .....	4	..	4
Remaining uncaptured at the close of this year .....	20	..	20

es during the last two years 6 only were recap-  
tured at large.

This is a large proportion, and the subject demands the  
attention of the Police authorities.

The state of education among the 3,628 prisoners ad-  
mitted into the Jails during the year is here  
exhibited :—

YEARS.	Prisoners fairly educated for their position in life.				Prisoners who can only read and write.				Prisoners entirely ignorant.			
	Number.			Proportion to whole number in custody.	Number.			Proportion to whole number in custody.	Number.			Proportion to whole number in custody.
	Males.	Females.	Total.		Males.	Females.	Total.		Males.	Females.	Total.	
.....	40	..	40	1·1	60	..	60	1·65	3,447	81	3,528	97·25
.....	77	..	77	1·88	63	..	63	1·54	3,869	79	3,948	96·58
.....	103	..	103	2·24	103	..	103	2·24	4,313	60	4,393	95·52

84. From these data it would appear that 1·1 per cent. of the prisoners were fairly educated, 1·65 per cent. could read and write only, and that 97·25 per cent. were entirely ignorant.

85. A comparison of these results with those of the two previous years shows that education among the criminal class has made no progress; on the contrary, that there has been some retrogression.

86. In the following statements are given in detail the financial results of the administration of the Jails for the official year under report.

87. The manner in which the average number of prisoners

Disposal of prisoners sentenced to labour. sentenced to labour during the two last years were employed is given below in detail :—

	In 1865		
	Average number.	Percentage on the average number in average number in confinement.	Average number.
Employed in ordinary manufactures. ....	362	25.39	29.
Hired by the Department of Public Works ..	..	..	316
„ by other departments .....	250	17.53	97
Employed as Jail servants.....	186	13.04	249
„ as guards .....	18	1.26	..
„ on the roads .....	112	7.85	..
„ on miscellaneous duties .....	227	15.92	301
„ on light work, being convalescent, weak, or old .....	65	4.56	..
Inefficient from age .....	26	1.82	..
Sick in hospital .....	51	3.58	234
Excused labour on account of Sundays and holidays .....	129	9.05	
Total.....	1,426	100.00	1,494

88. It appears from the above that, although the average number of prisoners sentenced to labour during 1864-65 was less than during the previous year, yet the number of those employed on manufactures had increased, and it is satisfactory to find that the percentage of those employed as Jail servants had fallen from 16.67 to 13.04. The extension of the system of convict intra-mural guards is also apparent from the above details, and is a satisfactory indication that its introduction is becoming more general.

89. The following data give the result of the labour of the 362 prisoners employed on manufactures within the Jail, as compared with the operations of the previous year :—

Jail manufactures and industry.

In 1864-65.

In 1863-64.

	Rs. a.			Rs. a. p.		
Of manufactured articles sold, for which was realized and paid into the trea-	13,874	13	10	17,794	14	4
Of manufactured articles used for public works	4,284	10	0	2,042	4	0
„ in store at the close of the year.	6,737	9	8	7,414	15	4
Total....	24,897	1	6	27,252	1	8
Net value of manufactured articles in store at the end of the preceding year.....	7,414	15	4	8,413	15	7
Gross receipts of the year....	17,482	2	2	18,838	2	1
Less cost of raw materials, &c.....	11,884	10	1	11,644	15	7
Net profits of the year .....	5,597	8	1	7,193	2	6
At the previous year .....	7,193	2	6	Information not forthcoming.		
Decrease....	1,595	10	5	.....		

90. There has been a falling off of Rupees 1,355-15-11 in the gross receipts of the year, and of Rupees 1,595-10-5 in the net profits. This result appears inconsistent with the fact already mentioned, that there had been an increase in the number of prisoners employed on manufactures.

91. This apparent inconsistency will, however, be explained on a reference to the following table, from which it will be seen that the average earning per prisoner at Kurrachee amounted to a mere trifle.

92. The epidemic which proved so fatal at the close of the year 1863-64, and the release of a large number of the survivors, put a stop to all factory operations for the greater part of the succeeding year, which have scarcely, even up to this time, been entirely revived.

	Earning of each manufacturing Prisoner.	Profit.		
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Kurrachee .....	0 15 3.3	96 5 10		
Hydrabad .....	11 11 3.3	72 5 4		
Shikarpoor .....	47 7 2	58 9 2		

93. It was impossible to contend against circumstances toward and calamitous, and it is to these alone that the unfavourable financial results of the manufacturing operations are attributable.

Jails in which there was an increase.

94. There has been an increase of profit in one Jail only, as given below:—

Number.	Jail.	Names of Officers in charge, and periods of service.	Names of Jailor and periods of service.	Amount of increase.	Profit.
1	Shikarpoor.	G. C. Grant, Esquire, Session Judge, from 1st May to 10th December 1864 .....	Mr. Woodward.	Rs. a. p.	
		W. A. Ingle, Esquire, Deputy Magistrate, from 11th December 1864 to 11th January 1865 .....		8 10 11	8 15 1
		Doctor J. Ffolliott, from 12th January to 30th April 1865..			

95. This result is satisfactory, and might, it is believed, be largely increased, were a permanent system of intra-mural labour permitted to be established, uninterrupted by indiscriminate transfers to Public Works gangs.

Jails in which there was a decrease.

96. In the two other Jails there was a falling off in the profits to the extent shown in the following table:—

Officers in charge and periods of service.		Names of Jailor and periods of service.	Amount of decrease.	Average of decrease per Prisoner.
			Rs. a. p.	Rs. a. p.
Hydrabad	n. Weeding, Esquire, from 1st May to 27th August 1864..	Mr. Horne.		
	Gibbons, Esquire, Deputy Magistrate, from 28th August to 27th September 1864....		3,041 10 0	16 5 7
	A. H. Plunkett, Esquire, Deputy Magistrate, from 28th September 1864 to 30th April 1865 .....			
	Major Widdicombe, from 1st May to 9th November 1864.	Mr. Phillips.		
	W. T. Cole, Esq., Deputy Magistrate, from 10th November to 28th December 1864 ....			
	Doctor Hopkins, Civil Surgeon, from 29th November to 14th March 1865.....		2,860 10 7	34 14 2
	B. Bradford, Esquire, Deputy Magistrate, from 15th March to 30th April 1865.....			

97. In the case of Kurrachee this falling off is susceptible, as already noticed, of satisfactory explanation, but at Hyderabad the factory operations demand more careful attention.

General financial results of labour of all kinds.

98. This information is contained in the following table :—

	In 1864			
Net profits on ordinary manufactures .....	5,597	8	1	10,
Amount credited to this department for value of convict labour hired to the Department of Public Works .....	....			23,
Amount received for value of convict labour lent to other departments .....	5,682	9	4	4,727
Amount of fines in commutation of labour ....	....			....
Total value ....	11,280	1	5	38,547
Against of the preceding year .....	38,543	14	11	41,67
Showing a decrease this year of.....	27,263	13	6	3,132 6

99. There has, on the whole, been a large decrease amounting to Rs. 27,263-13-6 in the financial results of the year. The breaking up of the Hand's Hill and Manora gangs and the entire stoppage of the factory at Kurrachee, in consequence of the epidemic at the close of the previous year, are the reasons which have chiefly contributed to this very unsatisfactory financial decrease.

100. The details under this head are given in the table below, in which the most successful manufacturing Jail is placed at the head of the list:—

Jails in the order of the results of manufactures.



NAME OF JAIL.	Number of years during which manufactures have been carried on.	Average number of Prisoners sentenced to labour.	Average number of Prisoners employed on manufactures.	Amount of profits in 1864-65.	Proportion of profits on each Prisoner employed on manufactures.	Proportion of profit on each Prisoner sentenced to labour.
Larpoor .....	..	579	94	4,460 2 0	47 7 2	17 7 8
drabad .....	..	465	82	959 12 10	11 11 3	2 1 9
Kurrachee .....	..	382	186	177 9 3	0 15 3	0 7 5

101. The average number of prisoners employed on manufactures bears far too low a proportion to the average strength of prisoners sentenced to labour. The cause of the results being so small at Kurrachee arises from those employed being inexperienced, or beginners, at the time the manufacturing operations were re-established.

In the following table are given the details of the cost of general expenditure, maintenance of the prisoners in the three Sind Jails :—

	In 1864-65. Prisoners 1,499			1863-64. Prisoners 1,876.		
	Rs.	a.	p.	Rs.	a.	p.
<i>Food.</i>						
Rations .....	55,213	13	10	65,625	11	10
Money allowance .....	313	2	0	1,824	13	11
			55,526 15 10			67,450 9 9
<i>Establishment.</i>						
Fixed Executive Staff and Police Guards .....	34,265	0	1	43,760	9	7
Extra .....	4,429	11	0	2,925	7	4
			38,694 11 1			46,686 0 11

	In 1864-65.			Prisoners 1,409.			Rs.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
<i>Hospital Charges.</i>									
European medicines . . .	87	3	4				103	11	9
Bazar ditto . . .	336	5	5				526	11	2
Sick diet . . . . .	727	11	6				2,155	15	3
Furniture including extra bedding and blankets . .	177	13	0				687	6	0
				1,329	1	3			3,4
<i>Clothing.</i>									
Cloth, bedding, blankets . .	7,133	9	3				10,800	12	10
				7,133	9	3			10,800 1
<i>Public Works Charges.</i>									
Additions, alterations and repairs . . . . .	2,653	14	7				3,969	8	5
				2,653	14	7			3,96
<i>Contingencies.</i>									
Contingent expenses including stationery . . . .	4,592	14	11				7,304	0	7
				4,592	14	11			7,304 0
				1,09,931	2	11			1,39,684 12 8
Against of the previous year . . . . .	....			1,39,684	12	8			1,27,508 14 6
Decrease . . . . .	....			29,753	9	9	Increase . . . .		12,175 14 2

103. These data are satisfactory, showing a decrease in the gross cost of maintenance of Rupees 29,753-9-9. The decrease, although general under every head of expenditure, and an evidence that economy has been attended to, is yet partly due to the smaller number of prisoners in the Jails during the last year.

104. The total cost of each prisoner is given in detail in the following table, and amounts to Rs. 73-5-5 against Rupees 74-7-4 during the previous year :—

Detailed cost of each prisoner.

	1864-65. Prisoners 1,490.		1863-64. Prisoners 1,676.	
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
<i>Food.</i>				
Including money allowance.		37 0 8		35 15 4
<i>Establishment.</i>				
Binding guards .....	22 13 9		23 5 3	
.....	2 15 3		1 8 11	
		25 13 0		24 14 2
<i>Hospital Charges.</i>				
Medicines .....	0 0 11		0 0 11	
ditto .....	0 3 7		0 4 6	
Diet .....	0 7 9		1 2 5	
Furniture, including extra blankets and bedding .....	0 1 11		0 5 10	
		0 14 2		1 13 8
<i>Clothing.</i>				
Blankets, bedding ... ..	....	4 12 2		5 12 1
<i>Public Works Charges.</i>				
Alterations, and repairs..	....	1 12 5		2 1 10
<i>Contingencies.</i>				
Contingent expenses including stationery .....	....	3 1 0		3 14 3
Total....	....	73 5 5		74 7 4
Against of the previous year....	....	74 7 4		73 7 1
Showing a decrease of....	....	1 1 11	Increase..	1 0 3

105. It will thus be perceived that there has been a decrease in cost of Rs. 1-1-11 per prisoner during the past year, which, on the whole, is a satisfactory result.

Cost of food.

106. The cost per prisoner for rations is here exhibited :—

No.	NAMES OF JAILS.	Average cost of each prisoner per annum in 1864-65.			
		Rs.	a.	p.	Rs.
1	Kurrachee .....	48	10	3	
2	Hydrabad .....	36	8	6	
3	Shikarpoor .....	29	9	11	

107. This increase is entirely due to the high price of food charge at Kurrachee appears excessive, and might, it is believed, be reduced by closer attention on the part of the local officers, and probably by adopting the departmental system of provisioning.

\*108. This is shown in the annexed table. Cost of clothing. to have been highest at Hydrabad and at Shikarpoor :—

No.	NAMES OF JAILS.	Average cost of each prisoner per annum in 1864-65.			Average cost of each prisoner per annum in 1863-64.		
		Rs.	a.	p.	Rs.	a.	p.
1	Kurrachee .....	5	12	4	6	7	5
2	Hydrabad .....	6	1	3	6	12	2
3	Shikarpoor .....	2	15	6	3	5	7

109. The decrease, as compared with the previous year in the latter Jail, though small, is satisfactory.

110. The table shows a decrease at Shikarpoor and Hydrabad under this head, but an increase at Kurrachee :—

Cost of fixed establishment.

NAMES OF JAILS.	Average cost of each prisoner per annum in 1861-65.	Average cost of each prisoner per annum in 1863-64.
	Rs. a. p.	Rs. a. p.
Kurrachee .....	29 13 0	20 6 4
Hydrabad .....	23 1 10	29 15 5
Shikarpoor .....	17 14 10	22 5 8

1. The increase at Kurrachee is stated to be the inclusion of cost of reliefs of guards which had been omitted in the calculation for the preceding year.

112. There is a decrease in this item at Shikarpoor and an increase in the other two Jails:—

	NAMES OF JAILS.	Average cost of each prisoner per annum in 1864-65.	Average cost of each prisoner per annum in 1863-64.
		Rs. a. p.	Rs. a. p.
1	Kurrachee .....	4 11 6	1 2 5
2	Hydrabad .....	2 14 5	1 10 1
3	Shikarpoor .....	1 12 10	2 4 8

113. The increase at Kurrachee is partly due to extra guards having been rendered necessary for the prisoners removed into tents during the epidemic, and who were not returned into Jail until after the close of the year.

114. This return is imperfect, the information from Kurrachee having been received too late for insertion. The cost, however, is trifling.

Cost of European medicines.

No.	NAMES OF JAILS.	Average each prisoner annum in 1864-65.	Rs.
		Rs. a. p.	
1	Kurrachee .....	....	
2	Hydrabad .....	0 2 9	
3	Shikarpoor .....	....	

115. There was no charge on this account at Shikar debitable to the year under report.

Cost of bazar medicines.

116. This information also is incomplete for the reason above assigned :—

No.	NAMES OF JAILS.	Average cost of each prisoner per annum in 1864-65.	Average each per s 18
		Rs. a. p.	Rs. a. p.
1	Kurrachee .....	....	....
2	Hydrabad .....	0 1 7	0 8 10
3	Shikarpoor .....	0 7 8	0 8 11

117. Both of these charges are trifling, and indicate attention to economy on the part of the medical officers.

118. These include hospital diet, furniture, and all expenses other than those contained in the preceding two tables :—

Hospital charges.

NAMES OF JAILS.	Average cost of each prisoner per annum in 1864-65.	Average cost of each prisoner per annum in 1863-64.
	Rs. a. p.	Rs. a. p.
Kurrachee .....	1 10 3	2 12 1
Hydrabad .....	0 0 4	....
Shikarpoor .....	0 6 2	0 10 0

119. These results are satisfactory and show that economy has carefully practised by the Civil Surgeons.

Cost of additions and alterations.

120. These charges refer to works executed by the local officers by prison labour.

	NAMES OF JAILS.	Average cost of each prisoner per annum in 1864-65.	Average cost of each prisoner per annum in 1863-64.
		Rs. a. p.	Rs. a. p.
1	Kurrachee .....	0 8 6	1 2 2
2	Hydrabad .....	1 5 5	0 8 1
3	Shikarpoor .....	2 15 7	5 10 7

121. The mud Jail buildings at Hyderabad and Shikarpoor are more costly than the more substantial building at Kurrachee.

122. The contingent expenses in the three Jails, as given below, are high; a costly item, however, included under this head, is the transfer of prisoners, and to this cause may chiefly be attributed the high average cost per prisoner :—

Cost of contingencies.

No.	NAMES OF JAILS.	Average cost of each prisoner per annum in 1864-65.			Rs.
		Rs.	a.	p.	
1	Kurrachee .....	5	4	0	
2	Hydrabad .....	2	1	3	
3	Shikarpoor .....	2	6	6	1

123. The three Jails are placed in the order of economy as regards the gross cost in the following table:—

No.	NAMES OF JAILS.	Average cost of each prisoner per annum in 1864-65.			Average cost of each prisoner per annum in 1864-65.		
		Rs.	a.	p.	Rs.	a.	p.
1	Shikarpoor .....	58	9	0	57	13	2
2	Hydrabad .....	72	5	4	81	6	4
3	Kurrachee .....	96	5	10	79	5	3

124. The cost of maintenance at Kurrachee demands the serious attention of the officer in charge; at Hydrabad, although there has been a decrease, it is still too high, and the closest attention to economy is demanded.

Net cost. 125. This represents the cost per prisoner after deducting the value of prison industry:—



NAMES OF JAILS.	Average cost of each prisoner per annum in 1864-65.	Average cost of each prisoner per annum in 1863-64.
	Rs. a. p.	Rs. a. p.
Kurrachee .....	95 7 7	53 2 3
Hydrabad .....	55 6 6	66 12 2
Shikarpoor .....	45 15 6	49 1 4

126. Both Shikarpoor and Hyderabad show a decrease in the cost, whereas the increase at Kurrachee is far from satisfactory, though it is chiefly accounted for by the interruption in all manufacturing operations consequent on the epidemic.

127. This refers to the gross cost which has increased at Kurrachee and Shikarpoor:—

No.	JAILS.	1864-65.	1863-64.	Increase in 1864-65.
		Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Kurrachee .....	96 5 10	79 5 3	17 0 7
2	Shikarpoor .....	58 9 0	57 13 2	0 11 10

128. The cause of increase at Kurrachee has already been explained; at Shikarpoor it appears to have been chiefly owing to the increase in the cost of rations.

129. This has taken place at Hyderabad to the extent of Rupees 9-1 per prisoner, as shown below:—

Decrease of cost.

No.	JAIL.	1864-65.			1865-66.		
		Rs.	a.	p.	Rs.	a.	p.
1	Hydrabad .....	72	5	4	81	6	4

130. This information for the Gross and net cost of the prisoners, well as for the three preceding years, in the annexed table :—

YEARS.	Average number of prisoners.	Gross cost of maintenance.			Average gross cost per prisoner.	Deduct income of the Jails from all sources.	Net cost of maintenance.
		Cost of food, clothing, establishment, contingencies, &c.	Cost of repairs.	Total.			
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs.
1862	1,466	90,951 13 7	1,048 11 0	101,600 8 7	69 4 10	24,646 14 10	76,9.
1863	1,735	123,557 13 0	3,951 1 0	127,508 14 0	73 7 2	41,676 5 8	85,832 8 10
1863-64	1,876	135,715 4 3	3,969 8 5	139,684 12 8	74 7 4	55,391 1 7	104,293 11 15
1864-65	1,499	107,277 4 4	2,653 14 7	109,931 2 11	73 5 5	16,314 3 0	93,616 15 11
Total ..	6,576	400,502 3 2	12,223 3 6	412,725 6 8	72 12 9	118,023 9 1	294,696 13 7

131. The average gross cost of maintenance has been less than during the three preceding years, but rather higher than in 1862; this has been effected in spite of the heavy and increasing cost of every article of consumption as well as of Police guards.

132. The average net cost, however, does not give so favorable a result, and this is owing to the chief source of income, *viz.* the manufactures, having entirely failed at Kurrachee for reasons already frequently alluded to.

ne source of revenue which, if successfully  
feel confident, cover one-third of the Jail expen-  
Province. I refer to the manufacture of gunny bags,  
there is at all times a large demand and ready market.

I have endeavoured to introduce this branch of industry,  
so extensively and profitably carried on at Alipore and else-  
the Lower Provinces of Bengal, but as yet, I regret, with-  
rs.

a) The attention of the local officers shall again be directed  
-ject, and every endeavour made to attain so important an  
the reduction of the enormous expenditure with which the  
at present burdened.

136. A tabular statement is attached to this Report embodying  
the information contained in the monthly returns  
from the Lock-ups of the different districts.

-7. From this it appears that there were during the year  
prisoners confined in the Lock-ups. Of these, 5,243 were  
red to District Jails after conviction or for trial before the  
Judges, 4,317 were acquitted, 3,112 released without trial,  
-ed. The number remaining in confinement at the close of  
the year was 580.

138. The total cost on account of these prisoners was Rupees  
49,733-12-7; the average cost cannot be given in the absence of in-  
formation as to the daily average strength, but it is small as compared  
with that of the Jails.

139. A table is also appended giving such details as are avail-  
able regarding the number of reconvictions  
Reconvictions. during the year, together with their crimes and  
sentences.

140. At Kurracheé it is reported that no case of reconviction  
appears on the records. At Hyderabad there were 75, 33 of which  
were for theft. At Shikarpoor 25, 11 of which were for cattle steal-  
ing and house trespass.

141. The sentences awarded varied from 6 months to 5 years.

142. The general results of the year have

Concluding remarks. of mortality, owing to the arrangements, and the care and attention devoted

arrangements, and a decrease in the net profits of prison labour industry, due to causes which have already been explained.

143. The system of dry-earth sewage is successfully carried out in the Jails in this Province, the climate of which is peculiarly adapted for such a purpose.

144. My suggestions on all matters of Jail management have been met with attention; defects in sanitary and disciplinary arrangements which had been previously noticed, now no longer exist, an efficient system of intra-mural labour organized on a permanent footing, the transfers, frequently of skilled convicts trained with much prison labour and at considerable expense, to Public Works gangs, permitted, not only would the profits from prison industry be largely increased, but a uniform and much more efficient system of discipline than under present circumstances is now practicable would be established.

145. Under such a system not only would the disciplinary and financial position of the Jails be improved, but the rates of sickness and mortality would materially decrease.

C. G. WIEHE, M.D.,

Inspector General of Prisons.

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

## KURRACHEE.

The Jail was visited in the month of May 1864 by order of Government in consequence of an epidemic of fever which proved extremely fatal.

Details regarding the number and disposal of the 404 prisoners in this Jail are given in the annexed table:—

	Male.	Female.	Total.
Rate of the daily number of prisoners of all sorts, sick and well in custody, during the year 1864-65 .....	1,45,886	1,506	1,47,392
Average of ditto .....	400	4	404
Number of prisoners remaining in Jail on the 30th April of the previous year .....	305	....	305
Number admitted into the Jail during the year 1864-65 .....	923	21	944
Transferred to other districts .....	327	2	329
Released .....	678	17	695
Escaped .....	5	....	5
Died .....	15	....	15
Executed .....	....	....	....
Remaining in Jail on the 30th April 1865. ....	203	2	205

The small daily average number in this table is altogether exceptional, and is due to the large number of deaths and releases on account of sickness which took place during the epidemic at the close of the previous year.

No new buildings have been constructed, no alterations effected, except the removal of a building which had been commenced by the Session Judge, but which was found objectionable from its position.

On the whole satisfactory, although some place. The Jailor, Mr. H. be "indefatigable in his exertions" the manufactory profitable, and has brought about a much better state of things as regards order and discipline."

Conduct of prisoners. Good.

There has been a large decrease in the net profits owing toward circumstances which are here the Deputy Magistrate in charge. number of convicts were employed on the harbour imp. works in 1863 by which considerable profit accrued to the Jail. were, however, withdrawn early in 1864; consequent on the appearance of the severe sickness that visited the Jail in the early part of the year, and which formed the subject of special report at the time. The removal of the prisoners into tents for several months, as well as the cessation of work and manufactures in consequence of sickness a considerable portion of the year, shows an unfavorable result. The head of labour and manufactures in 1864-65; the manufactures were not fairly revived until a late period of the year, and considerable difficulty was even then experienced owing to nearly all trained hands having died or been released during the epidemic.

Cost. There has been an increase in the cost of maintenance for reasons already mentioned in the body of the Report.

Classification. No systematic classification in force.

Solitary confinement. "A few" are reported to have been "confined for breach of Jail rules and discipline."

Education. "Instruction in reading and writing in Sindee has been attempted during the year."

Juvenile prisoners. "The number during the year was 7;" they "are confined apart from the adult convicts," and "are put to school under an adult good conduct convict for 6

employed during the rest of the working day in profitable labour."

No reconvictions have been reported during the year.

Of the 5 escapes 1 only took place from within the Jail, 2 have been recaptured, and 3 remain at large.

There is no garden to this Jail, nor are there means of making one which would in any way be advantageous.

As shown below the health of the prisoners has been remarkably good:—

Date s, 86 ver o. y	Admissions into Hospital.		Deaths.		Ratio per cent. of deaths.			
					To average strength in Jail.		To treated.	
	1863-64.	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.
Zymotic diseases .....	1,535	276	150	13	16.18	3.21	9.77	4.73
Constitutional .....	5	..	4	..	0.43	..	80.	..
Local .....	495	99	17	1	1.83	0.25	3.43	1.01
Developmental .....	9	2	1	1	0.1	0.25	11.11	50
Violent .....	531	16	12	..	1.29	..	2.26	..
Epidemic cholera .....	..	1	..	..	..	..	..	..
Treatment after punishment..	6	2	..	..	..	..	..	..
Total .....	2,581	395	184	15	19.84	3.71	7.13	3.8

These results are extremely satisfactory, that the sanitary measures adopted in consequence have been very successful.

## SHIKARPOOR.

Inspection.

Not inspected.

The report furnished by Dr. Ffolliott, the officer in this Jail, is so concise that I subjoin it, with but a few *extenso*.

### *Jail Buildings.*

“ The Jail buildings underwent extensive repairs during past year, the sum of Rupees 1,771-3-6 having been expended thereon by the Public Works Department, details of which furnished in Statement No. 14.

“ The high wall which divided the new from the old Jail has been removed by prison labour, and the *debris* used in filling in and improving the drainage of the Jail compound.

“ A cooking house has been made in the female prison as an experimental measure, with a view to have the whole of the prisoners' food prepared by the female convicts, if practicable. It has now had a fair trial for 11 months, and has been found very successful; the food being better prepared, and a system of peculation, which under the old plan it was difficult to guard against, defeated.

“ The alterations recommended in relation to the sleeping barracks have not yet been carried out, but the work is in the hands of the Executive Engineer, and will be commenced at once, and I hope completed before the close of the ensuing hot season, during which the prisoners sleep upon the ground in the open air, and do not require the barracks.”

### *Prisoners and their Disposal.*

“ The subjoined abstract exhibits particulars regarding the prisoners during the year, *viz*:—



	Male.	Female.	Total.
Mean of the daily number of prisoners of all sick and well in custody, during the 1864-65	2,12,398	5,076	2,17,474
Percentage of ditto	582	14	596
prisoners remaining in Jail on the of the previous year.....	509	15	524
Admitted into the Jail during the year 1865 .....	720	23	752
Transferred to other districts .....	1	1	2
Released	582	19	601
Escaped	2		2
Deaths	23		23
Excess	4	1	5
Remaining in Jail on the 30th April 1865 ....	626	17	643

“ The number of criminals sentenced to death amounted to 5, all of whom, with the above exceptions, were transferred to the Deputy Magistrates for execution at the scene of their crimes.”

#### *Conduct of Jail Officers and Prisoners.*

“ The establishment under the orders of the Jailor has worked satisfactorily, With the exception of the English writer, who was removed for incompetency, and replaced by a Parsee from Kurrachee, who, after a service of 3 months, got a better paid appointment in the Collector's Office, and was replaced by the present clerk, Mahomed Jumall. The efficient services of Mr. Woodward, the Jail Marshall, have been noticed in former reports, and I have much pleasure in recording my sense of his zeal in promoting Jail manufactures and prison discipline.

“ There have been 467 punishments inflicted the year for breaches of discipline. The offences are for the most part trivial, and confined to a small section of bad conduct, the most frequent being in default of performing allotted tasks, work, and being in possession of snuff, tobacco, &c. These luxuries are introduced by the Rural Police, but up to the present they have managed to escape detection.

“ The usual punishment is from six to thirty lashes with nine-tails on the bare back : as many as fifty lashes have often been inflicted for attempts to escape, but this is exceptional, the average number awarded being ‘ twelve lashes.’ Generally speaking, the prisoners conduct themselves respectfully, and never combine for any object, owing to the diversity of tribes and caste among them.”

### *Labour and Manufactures.*

	1864-65.			1865-66.		
	Rs.	a.	p.	Rs.	a.	p.
Average number of prisoners daily engaged in manufactures .....	94	0	0	97	0	0
Net profit realized .....	4,460	2	0	3,619	7	1
Average earnings of each prisoner .....	47	7	2	37	5	0

“ Contrasted with the previous year the period under review exhibits a falling off in profits of Rs. 840-10-11. This decrease is attributable to the fact of no profits having been credited to the manufacture and making of the prisoners’ clothing, and the impracticability of turning out cotton fabrics at remunerative prices owing to the high rates demanded for the raw material. The deficit is, however, apparent only, as the manufacture of prisoners’ clothing from the raw material by Jail labour has been found more economical than purchasing in the bazar, and has helped to effect a saving in the total

of Rs. 0-6-1 as compared with the previous year. For labour a sum of Rs. 5,661-5-7 has been realized, and the annual average earning of Rs. 21-7-1 per prisoner.

The following table exhibits the works upon which the prisoners employed, and the amount realized on each :—

	rs.	a.	p.
Repairing Bund of Sherwah Canal	3,930	6	7
Digging and cleaning canals .....	1,287	4	0
Repairing roads .....	443	11	0
Employing coolies .....			
Public Works Department .....	0	0	0
Miscellaneous .....	0	0	0

The release of the three Chinese convicts has been a severe blow to the Jail Factory. They were offered Rs. 20 each per month to remain, and teach the prisoners; but, finding the conditions of their detention did not prevent their return to China, they could not be induced to remain.

The subjoined comparative statement shows the cost of maintaining prisoners during the years 1863-64 and 1864-65 :—

	1864-65.			1863-64.		
	Rs.	a.	p.	Rs.	a.	p.
Average number of prisoners .....	596	0	0	471	0	0
Rations per day .....	0	1	3	0	1	½
Clothing (including bedding, blankets, &c.) ....	1,769	15	0	1,577	4	4
Fixed establishment (including guards and reliefs) .....	10,685	0	0	10,528	1	7
Extra Establishment .....	1,075	7	9	1,080	0	0
Hospital charges (including Europe and bazaar medicines, sick diet, furniture, bedding, extra blankets .....	516	1	8	554	14	9
Contingencies, including stationery .....	1,434	15	9	1,037	8	9
Additions, alterations and repairs .....	1,771	3	6	2,672	4	0
Total net cost of each prisoner per annum ..	45	15	6	49	1	4

\* " The daily ration of each prisoner during the past year has cost 1 anna and 3 pies against 1 anna and ½ pie only in the previous year.

The increased expenditure is owing to the high of food during the period under review. Destructive deficient harvest, and a famine in Kutch combined to value of grain in Sind throughout the year.

“ Under the head of clothing, &c., a sum of Rs. 192-10-8 of the previous year has been expended to meet the increased wants of a higher daily average number of prisoners—there having been during the past and previous years 596 respectively.

“ In the fixed establishment a saving of Rs. 156-14-5 is but, as no details have been furnished by the Captain of Poona cause is not accurately accounted for, no reduction in the number of guards having been effected since last report.

“ The hospital charges during the past year exhibit a saving of Rs. 38-13-1 as compared with the previous year; the stock of rope medicine and clothing on hand permitted a corresponding reduction in the yearly estimate.

“ The contingent expenses are more by Rs. 397-7-0 than the previous year in consequence of extra charges being incurred in transferring prisoners to Kurrachee for transportation and purchase of dead stock.

“ The total cost of each prisoner has amounted to Rs. 45-15-6 against Rs. 49-1-4 in the previous year, showing a saving in favor of the period under report of Rs. 3-1-10 per prisoner. This result is partly due to the savings enumerated in the preceding paragraphs and the great economy of the non-periodic system of clothing. Besides, a quantity of warm clothing remaining from the previous year was made available, and obviated the necessity for further expenditure under this head.”

#### *Classification.*

“ The prisoners are divided into six classes, viz :—

1. Prisoners sentenced to rigorous imprisonment.
2. Ditto ditto to simple ditto.
3. Females.
4. Juveniles.
5. Convict guards and muccadums.
6. Civil debtors.

of this sub-divided into hard labour and sedentary as designated (details will be found in Statement

The second class, or simple imprisonment and security men, are separate from all other prisoners; they are allowed to do light work such as cleaning and spinning wool and cotton, but no pressure is put upon them to force the labour. What they do, is for amusement and of their own accord.

The number of females imprisoned during the year averaged 100. They have distinct wards in a walled enclosure, and are employed in making the prisoners' food. This is found a great improvement on the system of allowing the male prisoners to cook; peculation has been defeated, the food is better prepared, and, in addition to these advantages, it supplies a fitting employment for the females.

The juvenile offenders averaged 43 during the year. They have also distinct wards, and are kept apart from the elder prisoners in a walled enclosure, and are taught some trade if sentenced to a long period of imprisonment; otherwise they are employed in spinning and spinning wool and cotton.

The fifth class is composed of convict guards and muccadums, selected from among the best behaved prisoners, in accordance with instructions received on the subject. The system works satisfactorily, and the average number employed during the year was 5.

"The civil debtors' prison is distinct from the criminal Jail and divided by a wall for male and female debtors."

### *Solitary Confinement.*

"Solitary confinement being rarely awarded by the Magistrates as a punishment, the solitary cells are almost exclusively used for the punishment of refractory prisoners and security of condemned criminals."

### *Education.*

"No attempts have been made in this direction."

*Juveniles.*

"The average number of boys under 15 years of age during the year was 43. All sentenced to over six months are in charge of a muccadam to the factory during the day purpose of learning some trade. The short-term prisoners ployed under charge of a muccadam in cleaning and spinn and cotton, and all are kept apart from the elder prisoners, and in an enclosed yard during the night."

*Reconvictions.*

"During the period under report there have been 25 reconvictions. But the individuals were professional thieves who had other means of subsistence. The deterring effect of Jail discipline upon this class is doubtful; several cases having lately come to my notice of prisoners, seemingly reformed and capable of earning living by trades acquired in confinement, having been reconvicted more than once."

*Escapes.*

"2 prisoners escaped during the year from gangs employed in out-door labour, were recaptured, and sentenced to additional imprisonment for the offence."

*Gardens.*

"The amount realized by sale of vegetables from the jail garden has amounted to Rs. 245-4-2. Deducting for labour and other expenses Rs. 28-4-0 the net profit amounted to Rs. 217-0-2. The garden is not large enough to supply sufficient vegetables to the prisoners throughout the year. More ground should be taken in, and the cultivation extended to afford a healthy employment for the prisoners and secure a supply of fresh vegetables throughout the year."

	Admissions into Hospital		Deaths.		Ratio per cent. of deaths.			
					To average strength in Jail.		To treated.	
	1863-64	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.	1863-64.	1864-65.
khair diseases.....	456	484	8	14	1.70	2.35	1.75	2.89
febrile diseases.....	..	1	..	..	..	..	..	..
Thyroidal „.....	179	150	7	6	1.49	1.01	3.91	4.0
maelocloymental „.....	10	5	4	..	0.85	..	40	..
morulent „.....	10	18	1	3	0.21	0.5	10	16.67
Thyroidal cholera.....	..	..	..	..	..	..	..	..
Cop Total.....	655	658	20	23	4.25	3.86	3.05	3.5

About one-half the number of deaths may be fairly attributed to the effects of cold caught at night for want of sufficient covering. The difference of temperature between the day and night ranges from 40° to 60°, and the ill effects of sudden fall in the temperature at night are increased by the tiled floors of the sleeping wards and the absence of doors and windows.

“When it is remembered that at least one-third of the number of prisoners who come from the left bank of the Indus have enlarged spleens, and suffer more or less with miasmatic cachexia, their unfavorable position in confinement will be apparent. Otherwise the health of the prisoners generally has been good, and no disease of an epidemic character has appeared during the year.”

General remarks and recommendations—

“The desideratum in the Shikarpoor Jail is suitable in-door employment for the prisoners. The manufacture of gunny bags would,

in a great measure, supply this if it could be attempted made during the previous year failed through workmen to teach the prisoners.

“Raw hemp can be imported cheaply and without trouble from Mooltan, and any quantity of the manufactured article would find ready sale in Sukkur or Kurrachee. As no workmen can be found in Sind who understand the manufacture of the fabric such as gunny bags, I would recommend the transfer from the Jail to Shikarpoor of a few spinners and weavers to teach the prisoners working.

“Carpenters’ and cabinet-makers’ work find a ready market in Upper Sind, but the prisoners at present engaged in these trades are unskilled, and turn out only the coarsest articles. All manufactured articles are, however, sold at once, and this branch of industry is susceptible of great extension.

“The manufacture of carpets and cotton fabrics generally has been crippled by the high price of cotton, and is consequently limited to orders and current demands.

“The conservancy of the Jail has been already reported on and works satisfactorily. Dr. Ritchie, the Deputy Inspector General of Hospitals, inspected the Jail on 21st of December 1864, and was much pleased with the general cleanliness and the respectful bearing of the prisoners.

“In conclusion, I would invite attention to the fact, that the daily average number of prisoners during the year has been nearly 600, and is steadily increasing. The number was kept below 500 in former years by transferring prisoners to Kurrachee for employment upon the harbour works; but as those works have been stopped, and no more transfers are likely to take place, the average number will seldom be below 600 in the Shikarpoor Jail. Under these circumstances I would respectfully submit a proposition to increase the Jail and hospital establishments; under existing rules first-class hospital establishments are sanctioned to Jail containing an average of over 500.

“The sum sanctioned for the Jailor’s salary is not sufficient to secure the services of a competent and trustworthy man. Mr.



the appointment on Rs. 10 per mensem less  
at the Collector's Office, upon the hope held out to  
of increased pay and advancement in this department.

Lieutenant Grant, the Session Judge of Shikarpoor, who  
has the greatest interest in the development of the Jail factory  
and discipline, relinquished charge of the Jail on 10th De-  
cember to Mr. Ingle, the then Hoozoor Deputy Magistrate, from  
whom he received charge on his appointment to act as Deputy  
Magistrate of Shikarpoor and Sukkur on 11th January 1865."

We have much satisfaction in bringing to the notice of Government  
the attention devoted to the careful management of the Jail by  
Lieutenant Grant, the Session Judge lately in charge, and by Dr.  
Ingle, the Civil Surgeon at present in charge, and in bearing per-  
sonal testimony to the success with which these officers' exertions  
have been attended.

#### HYDERABAD.

Inspection.

Not inspected.

No additions or alterations have been completed during the year.

Buildings.

Quarters are under construction for the Jailor  
to enable him to reside near the Jail.

Prisoners and their  
disposal.

This information is contained in the  
following table:—

	Males.	Females.	Total.
Aggregate of the daily number of prisoners of all classes, sick and well, in custody during the year 1864-65.....	1,78,500	3,780	1,82,280
Daily average of ditto .....	489	10	499
Number of prisoners remaining in Jail on the last day of the previous year .....	607	11	618
Number admitted into the Jail during the year 1864-65. ....	1,895	37	1,932
Transferred to other districts .....	531	....	531
Released .....	1,539	41	1,580
Escaped .....	7	....	7
Died .....	33	1	34
Executed .....	5	1	6
Remaining in Jail on the 30th April 1865. ....	387	5	392

The Jailor discharged for misconduct.

Conduct of Jail officers. other subordinates and prisoners have been good, but the establishment is insufficient; this will be remedied by the new scale recently recommended for the Sind Jails.

The average earning of each prisoner has been Rs. 1

Labour, and manufacture.

and the net profits amount to Rs. 9 only; these small profits are attributed to high price of raw materials.

The total cost per prisoner has been Rs. 72-5-4

Cost.

Rs. 81-6-4 during the previous year.

There has been a decrease in the charges for establishment and contingency, which is satisfactory, although cost of feeding has increased by Rs. 0-1-11 per prisoner.

Classification.

No systematic classification in force.

Solitary confinement.

Employed as a punishment for lack of discipline in the cases of refractory hardened convicts.

Attempted in the case of juvenile offenders with some

Education.

An educated and well-conducted convict is selected as a teacher.

There have been 75, 6 of which have been for three times and 69

Reconvictions.

have returned to Jail twice. The discipline is said to be very strict, and the officer in charge is of opinion that reconvictions cannot be attributed to any relaxation of discipline but to the dearth of food.

Escapes.

There have been 7 escapes, viz. 6 from out-door gangs and 1 from hospital.

At a considerable distance from the Jail and not sufficiently

Gardens.

productive to supply all its wants. It has been an expensive experiment and will shortly be relinquished.

It shows an increase of mortality chiefly due to zymotic diseases in consequence, no doubt, of the overcrowded state of the Jail:—

	Admissions into Hospital.		Deaths.		Ratio per cent. of deaths.			
	1863-64.	1864-65.	1863-64.	1864-65.	To average strength in Jail.		To treated.	
					1863-64.	1864-65.	1863-64.	1864-65.
typhoid diseases.....	335	478	10	23	2.09	4.61	2.99	4.81
constitutional „.....	1	4	1	4	0.21	0.8	100	100
„ „.....	66	98	4	7	0.84	1.4	6.06	7.14
„ „.....	10	3	5	..	1.05	..	50	..
„ „.....	5	9	..	..	..	..	..	..
cholera.....	..	..	..	..	..	..	..	..
Treatment after punishment.....	..	7	..	..	..	..	..	..
Total....	417	599	20	34	4.19	6.81	4.8	5.68

The formation of a gang at Oomerkote afforded the relief which the Jails were unable to supply.

General remarks and recommendations.

None offered by the officer in charge.

C. G. WIEHE, M.D.,

Inspector General of Prisons.

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

## APPENDIX N<sup>o</sup>. II.

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SANITARY REPORT OF THE MEDICAL OFFICERS

ON THE

JAILS IN SIND,

FOR THE OFFICIAL YEAR 1864-65.

*Annual Report of the Medical Officer on the Kurrachee Jail  
for the Year 1864-65.*

TOPOGRAPHY—nature of climate—rain-fall—temperature:—

The soil about Kurrachee is tight clay or sandy, with rocky masses cropping out here and there. The elevation of the Jail site, of the native town generally, is low. The climate during the season was pleasant and agreeable, and cooler on the whole than generally the case, westerly and south-westerly winds prevailing from May to the beginning of October; subsequently the winds were easterly, sometimes westerly, at others north-east. Rain fell in May, June, August, December, January, and March, and the fall for the year was 9 inches and 31 cents, exceeding the usual average by some 4 per cent.

The maximum temperature for the year was 108°, the minimum 42°, and the mean 75°.

II.—POSITION OF JAIL,—with reference to city or camp.—Additions and alterations to buildings:—

The Jail is situated at the eastern side of the native town, and close to it, and rather more than one mile west of the camp.

It is proposed to remove the cells for untried prisoners and native debtors from their present position on the south-west side of the wall of the large sleeping yard in order that openings may be made in the wall for the better ventilating of that yard. It is proposed also to remove the cells for European debtors, but the sites for these cells, when removed, have not yet been determined.

### III.—TOTAL NUMBER OF PRISONERS ADMITTED 1864-65:—

Weight on admission and discharge of prisoners of the district as ascertained from Surgeon's special register.				Weight on admission and discharge of prisoners of other districts as from Surgeon's special register.			
Number.	Average weight of prisoners on admission.	Average weight of prisoners on discharge.	Number who gained or lost weight, or were stationary, with average of gain or loss.	Number.	Average weight of prisoners on admission.	Average weight of prisoners on discharge.	
266	Lbs. oz. 119 12 $\frac{6}{13}$	Lbs. oz. 119 1 $\frac{4}{13}$	101 lost, 33 gained, 132 stationary.  Average of gain. Lbs. oz. 2 8 $\frac{8}{13}$  Average of loss. Lbs. oz. 2 11 $\frac{9}{13}$				

### IV.—GENERAL HEALTH OF THE PRISONERS as deducible from the foregoing data—

The above table of weights extends over about ten months of the year only, as the weighing of prisoners was suspended during the late epidemic fever, and was not resumed till the month of June; hence long-sentenced prisoners are not included. The general health of prisoners for the last nine months of the official year has been remarkably good, and although there has been, in a considerable number of convicts, some loss of weight, their appearance has been that of well nourished men.

V.—DIET—its quality, sufficiency or otherwise; as a predisposing or exciting cause of any particular disease, and its effect on the general health of the prisoners;—modifications proposed—on what grounds—

of good quality, and sufficient in quantity, the appearance of the epidemic and the introduction of any improvements subsequently the prisoners have been very healthy. During the epidemic it was found necessary to allow extra diet for some months, and it was afterwards considered to allow  $\frac{1}{2}$  ounce of ghee to each convict in place of oil, as it enters into the diet of all the people of Sind, who do not all.

**LABOUR**—out-door or in-door—influence on the health of prisoners—ratio per cent. of deaths to treated in each class—

Out-door labour ceased just prior to the commencement of the year. In-door labour, therefore, was the only labour employed several months; the only out-door labour that comes under this description was carrying earth for the renewal of the surface of the compound, the floors of the sleeping pendalls and hospital, and carrying water, and the removal of nightsoil tubs.

The number of in-door labour prisoners has been 313 and of 27, but no separate register of the number treated in each has been kept. The deaths all occurred in the in-door labour list.

**VENTILATION**—how secured—defective or otherwise—measures for improvement—

The sleeping pendalls are all open on every side except during the cold season, when a date mat is hung up on the north-east side of each pendall. The hospital and all the cells are sufficiently ventilated at the top and at the sides by doors and windows.

It is proposed to make openings (large) in the south-west wall of the large sleeping yard for the purpose of increasing ventilation.

**VIII.—CLEANLINESS**—how maintained in cells and barracks and in the Jail generally—measures for improvement—

The floors of the cells, pendalls, and hospital and the yards are all swept daily, and the floors are cow-dunged weekly, while the walls of the several cells and of the hospital are white-washed several times a year.

IX.—DRAINAGE—kind—state—defects ;  
improvement—

There are very few drains in the Jail, and those which are made of stone and chunam. They are in good condition, simply for the purpose of carrying off the refuse water from that used by the prisoners for washing and bathing. They are for the purpose required very well.

X.—CONSERVANCY—what mode in force—with special reference to the dry-earth sewage—what deodorizers in use—nightsoil disposed of—defects or otherwise of present system—means of improvement—

Dry conservancy has been in use for the last 4 years, and for the last 10 months earth sewage has been employed in addition. No other deodorising agent has been used since the earth system was put in operation, which has answered the purpose admirably and destroyed all odour. Previous to this, chloride of lime and charcoal were had recourse to when needed. The nightsoil is carried in tubs without disturbance of their contents, and buried in a  $1\frac{1}{2}$  mile distant. I have no improvement to suggest.

XI.—CLOTHING—its cleanliness, sufficiency, or otherwise—its effect on the health of the prisoners, with special reference to pulmonary affections—

The clothing during the past year has been of a better description than formerly, and the usual quantity has been found sufficient ; it is washed about once in ten days or so, and there has not been any tendency to pulmonary affections.

XII.—OVERCROWDING—average number during the year above capacity estimated at 500 cubic feet—its influence in the production of disease and mortality—temporary or permanent measures of relief adopted—

The average number of prisoners for the year has not exceeded 404, which has afforded very ample space for each prisoner, much within the above mentioned limit, besides which it must be remembered that the sleeping pendalls are open on all sides, thus affording the most free circulation of air.



MORTALITY :—

Ratio of deaths from diseases from which the highest numbers died.

Ratio of deaths, to total deaths, average strength.	Dysentery.		Fevers.		Cholera.		Diarrhoea.	
	Number died.	Ratio per cent. of deaths to strength.	Number died.	Ratio per cent. of deaths to strength.	Number died.	Ratio per cent. of deaths to strength.	Number died.	Ratio per cent. of deaths to strength.
3.7	..	..	10	2.4	..	..	3	.7

Causes to which the foregoing mortality is ascribable—suggestions to preventible means—

In May and June there were 6 fatal cases of fever, *viz.* 4 of severe and 2 of intermittent; these occurred in prisoners who had a few months previously suffered from the epidemic fever then prevalent in the Jail, and who were more or less cachectic. The remaining cases were of the ordinary intermittent character complicated with bowel or chest affections, occurring in subjects of broken constitution. The cases of diarrhoea were all complicated with chest affections or fever, and the subjects were all cachectic.

The only suggestion I can make as to prevention is the rigid carrying out of the sanitary rules now in operation.

XIV.—EPIDEMICS—rate of mortality from them, with a brief account of their origin, progress, termination, and the means, therapeutic and hygienic, taken to arrest their progress—

There has not been epidemic disease of any kind prevalent in the Jail during the year.

XV.—REMARKS—on the general sickness and mortality of the year, as deduced from all the foregoing data—

In the early part of the official year the ~~in~~ excess owing to cases arising out of the great prevalence of fever in the months of January, February, March and April, viz. the cachectic and reduced state in which it had left the prisoners. During the latter 8 months there were only 5 deaths and the prisoners during that period have been remarkably healthy.

XVI.—GENERAL SUGGESTIONS as to the measures for improving the sanitary state of the Jail.

The sanitary condition of the Jail is so satisfactory as to require little suggestion for improvement. In the months of May, June and July the prisoners were in tents, and during that period the walls of the Jail and the floors of the pendalls, cells and hospital were completely renewed by fresh earth. The drainage is good, and the system of conservancy as perfect as it can be made. It was recommended by a medical committee that the south-west wall of the new sleeping yard should have openings made in it for the better ventilation of the yard, and this subject is yet under consideration.

JOHN BEAN, Civil Surgeon

In Medical Charge

D. RITCHIE,  
Dy. Inspector General of Hospitals,  
Sind Division.

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*Sanitary Report of the Medical Officer on the Hyderabad Jail, for the year 1864-65, from 1st May 1864 to 30th April 1865.*

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I.—TOPOGRAPHY—nature of climate—rain-fall—temperature—

Hydrabad is situated on the most northerly point of a chain of low calcareous hills running parallel to the River Indus and at a distance of about  $3\frac{1}{2}$  miles from it, 99-35 feet elevation above the sea,  $40\frac{1}{2}$  above adjacent country.

Climate may be considered a medium between that of Upper Sind and Kurrachee, cold and bracing from the beginning of

end of February, but hot and oppressive during the hot months.

Rainfall during the year 10 inches 9 cents.

Temperature during the hot months often  $109^{\circ}$  in the shade, and during the cold season below 50 Fahrenheit

— POSITION OF JAIL—with reference to city or camp.—Additions and alterations to buildings—

Location of the Jail very good, being highest to the north-east and to the north of the Hyderabad city.

The Jailor's house has been put in repair and the verandah and the outer gate.

### III.—TOTAL NUMBER OF PRISONERS ADMITTED during the year 1864-65:—

Weight on admission and discharge of prisoners of the district as ascertained from Surgeon's special register.				Weight on admission and discharge of prisoners of other districts as ascertained from Surgeon's special register.			
Average weight of prisoners on admission.	Average weight of prisoners on discharge.	Number who gained or lost weight, or were stationary, with average of gain or loss.	Number.	Average weight of prisoners on admission.	Average weight of prisoners on discharge.	Number who gained or lost weight, or were stationary, with average of gain or loss.	Number.
114	106	No. gained 151, No. lost 291, stationary 33, average gained 6 lbs., average lost 8 lbs.	..	..	..	..	..

### IV.—GENERAL HEALTH OF THE PRISONERS—as deducible from the foregoing data—

The prisoners were very healthy till the month of January, and in March and April a great number of cases of fever and diarrhoea

occurred. The Jail is always so overcrowded that generally there is so little sickness.

V.—DIET—its quality, sufficiency or otherwise ; as a pre or exciting cause of any particular disease, and its effect on the general health of the prisoners ;—modifications proposed—on the grounds—

The diet table is herewith forwarded. It appears well suited to the natives of Sind. No modifications to propose.

VI.—LABOUR—out-door or in-door—influence on the health of the prisoners—ratio per cent. of deaths to treated in each class

The in-door prisoners have suffered much more than the out-door ones—the percentage of deaths to treated amongst the in-door being 12, amongst the out-door 1.

VII.—VENTILATION—how secured—defective or otherwise—measures for improvement—

Ventilation secured by roof ventilators, open windows, appear to answer very well, except in the hospital, where, owing to there being no windows in the back wall, ventilation in the winter months is very imperfect.

VIII.—CLEANLINESS—how maintained in cells and barracks and in the Jail generally—measures for improvement—

Cleanliness maintained by daily sweeping and watering, and by cow-dunging the barracks once at least every week.

IX.—DRAINAGE—kind—state—defects ; with measures for improvement—

Water escapes from the Jail through a hole in the wall emptying into an open drain to the rear of the Jail, which is kept clean.

X.—CONSERVANCY—what mode in force—with special reference to the dry-earth sewage—what deodorizers in use—nightsoil how disposed of—defects or otherwise, of present system—measures for improvement :—

Dry-earth sewage in use, dry earth and wood ashes the deodorizers, nightsoil removed twice a day and buried at some distance to the rear of the Jail.

de . . . its cleanliness, sufficiency, or otherwise; its  
 . . . of the prisoners, with special reference to pul-  
 . . . sections—

h convict is provided with two suits yearly of the usual Jail  
 the winter jackets being lined or quilted.

anliness is maintained by boiling in water and potash.

monary affections very prevalent during the cold season.

—OVERCROWDING—average number during the year above  
 estimated at 648 cubic feet—its influence in the production  
 e and mortality—temporary or permanent measures of relief

—daily average of overcrowding during the year ending 30th of  
 1865—249. I think the great sickness during the past month  
 the general sickly appearance of all, is to be attributed to overcrowd-  
 to relieve which a large number were transferred as follows:—

Transferred to Oomerkote.....	525
„ for transportation .....	6
„ died and hanged .....	42
„ transferred to districts and escaped .....	30
„ Discharged on the recommendation of medical officer.	7

### III.—MORTALITY:—

Total daily average strength of prisoners.	Total deaths.	Ratio of deaths to total daily average strength.	Ratio of deaths from diseases from which the highest numbers died.							
			Dysentery.		Fevers.		Cholera.		Diarrhœa.	
			Number died.	Ratio per cent. of deaths to strength.	Number died.	Ratio per cent. of deaths to strength.	Number died.	Ratio per cent. of deaths to strength.	Number died.	Ratio per cent. of deaths to strength.
483	34	07	1	·2	15	·3	..	..	6	·1

Causes to which the foregoing mortality is ascribable—suggestions as to preventible means.

The above table shows the cause of death died from other causes.

**XIV.—EPIDEMICS**—rate of mortality from them, w. account of their origin, progress, termination, and the means peutic and hygienic, taken to arrest their progress.

No epidemic during the year under report. \*

**XV.—REMARKS**—on the general sickness and mortality year, as deduced from all the foregoing data—

During the year 599 were admitted into hospital ; of these

**XVI.—GENERAL SUGGESTIONS** as to the measures for im the sanitary state of the Jail—

Water should be obtained from another source, especially du the hot months. I am of opinion that improved ventilation of hospital is much required, but, owing to faulty construction of a building to ventilate it properly, would be attended with many objections.

The Jail should be enlarged to prevent the daily overcrowding.

N. HOPKINS,

Assistant Surgeon.

In Medical Charge Hyderabad Jail.

*Diet Table of the Hyderabad Sind Jail sanctioned  
27th May 1863,*

Days.	Flour.			Rice.	Moong Dhall.	Salt.	Vegetable.	Curry Stuff.	Kokum or Tamarind.	Fuel.	Oil.	Mutton.	Fish.	Remarks.
	Wheat.	Bajree.	Jowaree.											
Hard Labour Prisoners.														
Sunday				1 8		5 6		8		1		8 4		
Monday	1 8				4	5 6		8		1		8		
Tuesday		1 8				5 8		8	8	1 4		4		
Wednesday			1 8		4	5 6		8		1 4		4		
Thursday	1 8					5 8		8	8	1 4		4		
Friday		1 8			4	5 6		8		1 4		4		
Saturday			1 8			5 8		8	8	1 4		4		
Chinese and Malay Prisoners	1			8 5		5 8		8	8	1		8	10	Mutton and fish to be allowed on alternate days.
Prisoners on sedentary employment, women and boys under 15 years, and under sentence of simple imprisonment.														
Sunday				1 3		5 6		8		1		8 4		
Monday	1 3				2	5 6		8		1		8		
Tuesday		1 3				5 6		8	8	1 4		4		
Wednesday			1 3		2	5 6		8		1 4		8		
Thursday	1 3					5 6		8	8	1		4		
Friday		1 3			2	5 6		8		1 4		8		
Saturday			1 3			5 6		8	8	1 4		4		

(True copy.)

N. HOPKINS, Civil Surgeon.

*Sanitary Report of the Medical Officer on  
for the year 1864-65.*

**I.—TOPOGRAPHY—nature of climate—rain-fall—temper.**

Shikarpoor is situated upon an alluvial plain in  $60^{\circ} 40'$  and  $28^{\circ} 10'$  E. long.; it is 22 miles west of the River Indus, a feet above the sea level at Kurrachee. The climate is dry throughout the year, with an excessively high summer temperature; winter. The thermometer ranges during the winter months  $27^{\circ}$  to  $110^{\circ}$ , and in the summer from  $80^{\circ}$  to  $135^{\circ}$ . The annual fall is under 4 inches, and the total quantity gauged during the year was 3 inches and 91 cents.

**II.—POSITION OF JAIL—with reference to city or camp—additions and alterations to buildings—**

The Jail is situated upon the high road leading from Sukkur Jacobabad, about 600 yards S. W. of the camp and the same distance S. E. of the town of Shikarpoor. No additions have been made to the Jail buildings during the past year; a high wall which divided the Jail from the old Jail has been removed, but the alterations recommended in relation to the sleeping barracks have not yet been carried out.

**III.—TOTAL NUMBER OF PRISONERS ADMITTED during the year 1864-65—752.**

Weight on admission and discharge of prisoners of the district as ascertained from Surgeon's special register.

Weight on admission and discharge of prisoners of other districts as ascertained from Surgeon's special register.

Number.	Average weight of prisoners on admission.	Average weight of prisoners on discharge.	Number who gained or lost weight, or were stationary, with average of gain or loss.	Number.	Average weight of prisoners on admission.	Average weight of prisoners on discharge.	Number who gained or lost weight, or were stationary, with average of gain or loss.
32	St. lbs. oz. 9 6 2	St. lbs. oz. 9 3 8	17 lost 7 gained. 8 stationary.  Average loss.  lbs. oz. 2 10	408	St. lbs. oz. 8 4 14	St. lbs. oz. 8 2 4	212 lost 96 gained. 100 stationary.  Average loss.  lbs. oz. 2 3



## HEALTH OF THE PRISONERS as deducible from the

ing in mind the fact that a large number of these prisoners never performed a day's labour previous to their incarceration, general health as deducible from the above data is rather favourable otherwise. The out-door labour during the past year was very severe, and the prisoners underwent great and unavoidable labour in repairing breaches in a canal to prevent a threatened inundation. A large gang (350) was encamped for nearly four months distant from the Jail, and to the hard labour and exposure from it may be referred one cause of the decrease in weight.

VI.—DIET—its quality, sufficiency or otherwise; as a predisposing or exciting cause of any particular disease, and its effects on general health of the prisoners; modifications proposed—on what grounds.

The chief and most important article of food is wheat, which can be procured of good quality. Jowarree and bajree have been tried from time to time, and found to cause derangements of the stomach and bowels sufficiently serious to warrant their discontinuance. The scale of diet at present in use is, in my opinion, insufficient, the prisoners very generally complain of it, and I believe it might be increased a little with advantage to their health. As I have in a late report considered this subject in detail I beg to refer to it, to obviate recapitulation.

VI.—LABOUR—out-door or in-door—influence on the health of the prisoners—ratio per cent. of deaths to treated in each class.

The out-door gangs are carefully selected, and composed of the most robust prisoners, and with a special reference to the previous occupation of the individuals when practicable: consequently, when no unusual amount of hard work is exacted from them, the percentage of sickness and mortality is not greater than among the in-door prisoners. The percentage of deaths to treated in each class during the period under review is, out-door 2, in-door 1.6; but the out-door labour during the past year was of an exceptional character, and three cases of death from sun-stroke occurred in the gang.

VII.—VENTILATION—how secured—defects—measures for improvements—

The ventilation is defective, but improvements have been recommended which, when carried out, will secure a better system. From the middle of April to the middle of October the prisoners are in the open air, and the barracks are only used in the event of dust-storms. During the winter months, from the position of the doors and windows, the barracks are excessively cold, and this is increased by the tiled floors. It is proposed to throw all the light into each barrack into one by cutting arches in the partition, to reduce the number of doors and substitute windows, and to remove the tiles and substitute earth floors.

VIII.—CLEANLINESS—how maintained in cells and bar and in the Jail generally—measures for improvements—

The barracks are swept out every morning, and the walls are washed occasionally; from the nature of the soil and climate cleanliness is easily maintained, and I have no improvements to suggest on this head. During the night dampered iron pots are placed in the ward for natural purposes—the pots are made in pairs to fit together, one being round and the other crescentic, and are placed on small heaps of dry earth to prevent their being upset. They are removed in the morning by sweepers, washed and placed in the sun until required again in the evening. This plan is found very successful.

IX.—DRAINAGE—kind—state—defects, with measures for improvements—

The drainage is maintained by surface drains, which are effective and require no improvements.

X.—CONSERVANCY—what mode in force—with special reference to dry-earth sewage—what deodorizers in use—night-soil how disposed of—defects or otherwise of present system—measures for improvement.

All the privies in the interior of the Jail, with the exception of those in the hospital and female compounds, have been removed. The large privy referred to in a former report has been divided into

the present used as a store for timber and other lying about exposed in the Jail compound, the as a privy and is found sufficiently large for the requirements of the Jail. The system practised is the dry-earth sewage, and the deodorizer used is dry earth. The privy is cleaned by the men thrice daily, and the nightsoil removed and buried in the open. This system is very successful.

—CLOTHING—its cleanliness, sufficiency, or otherwise; its influence on the health of the prisoners, with special reference to pulmonary affections—

The clothing used during the winter months is insufficient, consisting merely of a woollen cloth jacket and an extra cumbley in addition to the summer clothing. After being washed a few times the jacket becomes threadbare and of little use as a warm covering, and it has been found necessary to allow the prisoners to wear a cumbley jacket in addition wrapped round the chest until 10 o'clock A. M. I would recommend a stout dungaree *pairan* to be worn under the cumbley jacket; it might be washed as often as necessary, and would save the cumbley jacket which should never be washed (as a rule). The bedding is insufficient, and with the tiled floors is the chief cause of pulmonary affections so prevalent in the cold season. Steps have been taken to remedy these defects, which, when carried out, will cause a great improvement in the general health of the prisoners. The clothing is washed twice a week by men told off for that purpose.

XII.—OVERCROWDING—average number during the year above capacity estimated at 648 cubic feet—its influence in the production of disease and mortality—temporary or permanent measures of relief adopted—

Excluding the hospital, solitary cells and civil prison, the total capacity at 648 cubic feet to each prisoner shows accommodation for 500. The average number confined during the year was 597, which is rather above the available capacity. No sickness or mortality has occurred which can be referred to overcrowding, increased supervision was found necessary in the preparation of food and general conservancy of the prison, and all prisoners sentenced to 6 months' and under were detained in the district jails to relieve the pressure.

## XIII.—MORTALITY—

Total daily average strength of prisoners.	Total deaths.	Ratio of deaths to total daily average strength.	Ratio of deaths from diseases from which the highest num.						
			Dysentery.		Fevers.		Cholera.		Dir
			Number died.	Ratio per cent. of deaths to strength.	Number died.	Ratio per cent. of deaths to strength.	Number died.	Ratio per cent. of deaths to strength.	Number died.
597	23	3·8	3	3·5	3	3·5	..	..	6

Causes to which the foregoing mortality is ascribable—  
 tions as to preventible means—

The immediate cause of death in 5 cases was pulmonary disease, in 10 diseases of bowels, in 3 fever, in 3 sun-stroke, and in 1 erysipelas. The exciting cause in above half the number of cases, in my opinion, ascribable to the great vicissitudes of temperature during the cold season, and the want of sufficient clothing at night to meet this contingency. The bedding of a prisoner consists of a date mat 6 ft. × 2 ft. 3 in., a cumby 5 ft. 9 in. × 3 ft. 11 in. and 10 lbs. 4 oz. in weight, and an extra blanket 8 ft. 2 in. × 4 ft. and 2 lbs. 2 oz. in weight. This is not sufficient in a season when the thermometer falls as low as 27°, and frosts are frequent. When this deficiency is remedied I have no doubt of a satisfactory improvement in the health of prisoners.

XIV.—EPIDEMICS—rate of mortality from them, with a brief account of their origin, progress, termination, and the means, therapeutic and hygienic, taken to arrest their progress—

No disease of an epidemic character has appeared among the prisoners during the period under review.

on the general sickness and mortality of the  
from all the foregoing data—

mortality has amounted to 3·8 per cent. of the average; the average number of sick has been 14·2 only out of an average of 597 prisoners. If the 3 deaths from sun-stroke be regarded accidental, and deducted from the total deaths for the year, the average will be very much below that of last year, and will be much below the average of the past ten years. The average of former years cannot be taken as a fair criterion, as the mortality appears to have been kept down by the practice of releasing, while during the last 10 years no prisoner was released on account of sickness.

XVI.—GENERAL SUGGESTIONS as to the measures for improving the sanitary state of the Jail—

The measures proposed to improve the sanitary state of the Jail may be summarized as follows:—Improved ventilation and earth floors in the barracks, increase in the warm clothing during the winter months, and a little addition to the dietary. The extent of ground cultivation as a Jail garden is not large enough, and should be increased by taking in more land; the married Police lines might be moved to the north of the Jail, where there is plenty of unoccupied ground, and the present lines given up to the Jail to be added to the garden. The privy could then be moved to the garden aspect of the Jail; its present position next the high road is objectionable, the sweepers having to walk a considerable distance on the road to reach the garden.

J. FFOLIOTT,

Civil Surgeon, Shikarpoor.

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## APPENDIX N° III.

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# APPENDIX

## STATEMENT

*Statement showing the Number of Admissions and during the*

1.	1			2			3			4			5		
	Aggregate of the daily average number of Prisoners of all classes, sick and well, from the 1st May 1864 to 30th April 1865.			Daily average strength of Prisoners.			Number of Prisoners remaining in Jail at the end of last year.			Number admitted into Jail during the year.			Total number in Jail or aggregate of columns 3 and 4.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
...chee ..	1,45,886	1,506	1,47,392	400	4	404	305	..	305	923	21	944	1,22	21	1,249
Hydrabad ..	1,78,500	3,780	1,82,280	489	10	499	607	11	618	1,895	27	1,922	2,502	48	2,550
Shikarpoor ..	2 12,398	5,076	2,17,474	582	14	596	509	15	524	729	23	752	1,238	38	1,276
Total....	5,36,781	10,362	5,47,143	1,471	28	1,499	1,421	26	1,447	3,547	81	3,628	4,968	107	5,075

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

## No. III.

## No. 1.

*Disposal of Prisoners of all classes in the Jails in Sind year 1864-65.*

6		7		8		9		10		11		12		13	14	15	16
Transferred to other districts during the year.		Released during the year.		Escaped during the year.		Died during the year.		Executed during the year.		Total of columns 6 to 10.		Number remaining in Jail on the 30th of April 1865.		Percentage of Deaths to average strength in column 2.	Number the Jail is capable of containing, allowing 160 cubic feet of air to each man.	Number confined below capacity.	Number confined above capacity.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.			
327	2	678	17	5	..	15	..	..	..	1,025	19	203	2	205	3.71	530	126 ..
531	..	1,539	41	7	..	33	1	5	1	2,115	43	387	5	392	6.81	234	.. 265
1	1	582	19	2	..	23	..	4	1	612	21	626	17	643	3.86	600	4 ..
859	3	2,799	77	14	..	71	1	9	2	3,752	83	1,216	24	1,240	4.8	1,364	130 265

RBM

C. G. WIEHE, M.D.,  
Inspector General of Prisons.



# APPENDIX

## STATEMENT

### *Abstract Return of Mortality in the Jails*

1.	Aggregate of the daily number of Prisoners of all classes in custody during the year 1864-65.			Daily average strength of Prisoners of all classes in custody during the year.			Aggregate number treated during the year.	Number discharged cured.	Number died.	Number remaining under treatment on the 30th April 1865.	Ratio per cent. of aggregate treated to average strength.	Ratio per cent. of discharged to aggregate treated.
	Male.	Female.	Total.	Male.	Female.	Total.						
1	2	3	4	5	6	7	8	9	10	11	12	13
Kurrachee .....	1,45,886	1,506	1,47,392	400	4	404	425	405	15	5	105·2	95·29
Hydrabad.....	1,78,500	3,780	1,82,280	489	10	499	612	563	34	15	122·6	91·99
Shikarpoor .....	2,12,398	5,076	2,17,474	582	14	596	666	625	23	18	111·7	93·81
Total....	5,36,784	10,362	5,47,146	1,471	28	1,499	1,703	1,593	72	38	113·61	93·54

No. IV.

No. 2.

*in Sind during the year 1864-65.*

CLASSIFICATION OF RATIO OF DEATHS.																		
Ratio per cent. of deaths to aggregate treated.  Ratio per cent. of deaths to average strength.		Deaths from												Ratio per cent				
		Cholera.	Dysentery.	Diarrhoea.	Fever.	Phthisis.	Other diseases.	Other Causes.						Total of all classes of deaths.	By Cholera.	By Dysentery.	By Cholera.	By Dysentery.
								Accidental.					Suicidal.					
								Drowning.	Natural decay.	Atrophy and debility.	Apoplexy.	Total.						
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
3.53	3.71	..	..	3	10	..	2	..	..	..	..	..	..	15	..	..	0.74	
5.56	6.81	..	1	6	15	3	9	..	..	..	..	..	..	34	..	0.21	1.2	
3.45	3.86	..	3	4	5	..	8	..	..	..	3	3	..	23	..	0.5	0.67	
4.23	4.8	..	4	13	30	3	19	..	..	..	3	3	..	72	..	0.27	0.87	

# APPENDIX

## STATEMENT

### *Abstract Return of Mortality in the Jails*

JAILS.	CLASSIFICATION OF RATIO OF DEATHS.						RELIGION.							
	Ratio per cent. of Deaths.						Daily average strength of				Deaths among			
	By Fever.	By Phthisis.	By other diseases.	By other causes.		Total of all classes.	Hindus.	Musulmans.	Christians.	Other denominations.	Hindus.	Musulmans.	Christians.	Other denominations.
	To total daily average strength in Jail.	To total daily average strength in Jail.	To total daily average strength in Jail.	Accidental.	Suicidal.	Total of all classes.								
	2	3	4	5	6	7								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Kurrachee ..	2.47	..	0.5	..	..	3.71	88	302	8	6	2	13	..	..
Hydrabad ..	3.0	0.6	1.8	..	..	6.81	40	459	..	..	1	33	..	..
Shikarpoor ..	0.85	..	1.34	0.5	..	3.86	62	531	..	3	3	19	..	1
Total..	2.0	0.2	1.26	0.2	..	4.8	190	1,292	8	9	6	65	..	1

## No. IV.

## No. 2 (continued).

*in Sind during the year 1864-65.*

Ratio per cent. of Deaths.				SEX.				SENTENCE.											
				Daily average strength of		Deaths among		Ratio per cent. of Deaths.		Daily average strength of Prisoners sent to Imprisonment for									
To daily average strength of Hindus.	To daily average strength of Mussulmans.	To daily average strength of Christians.	To daily average strength of other denominations.	Males.	Females.	Males.	Females.	To daily average strength of Males.	To daily average strength of Females.	6 months and under.	Above 6 months and up to 1 year.	Above 1 year and up to 2 years.	Above 2 years and up to 5 years.	Above 5 years and up to 10 years.	Above 10 years.	Civil Prisoners.	Till security is furnished.	Life.	Criminal.
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
2.27	1.3	..	..	400	4	15	..	3.75	..	95	120	108	48	9	2	7	8	6	1
2.5	7.19	..	..	489	10	33	1	6.75	10	185	139	103	28	9	1	7	3	1	..
4.84	3.57	..	33.33	582	14	23	..	3.95	..	114	266	132	48	19	..	3	4	3	..
3.16	5.03	..	11.11	1471	28	71	1	4.83	3.57	394	525	343	124	37	3	17	15	10	1

## APPENDIX

## STATEMENT

*Abstract Return of Mortality in the Jails*

JAILS.		SENTENCE.										Ratio per cent. of Deaths to daily average strength of Prisoners sentenced to Imprisonment for				
		Deaths among Prisoners sentenced to imprisonment for														
		6 months and under.	Above 6 months and up to 1 year.	Above 1 year and up to 2 years.	Above 2 years and up to 5 years.	Above 5 years and up to 10 years.	Above 10 years.	Civil Prisoners.	Till security is furnished	Life.	Criminal Lunatics.	6 months and under.	Above 6 months and up to 1 year.	Above 1 year and up to 2 years.	Above 2 years and up to 5 years.	Above 5 years and up to 10 years.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Kurrachee .....	2	4	7	2	..	..	..	..	..	..	2.1	3.33	6.48	4.17	..	
Hydrabad .....	13	5	11	2	1	1	..	..	..	..	7.03	3.6	10.68	7.14	11.11	
Shikarpoor .....	3	6	10	3	..	..	..	..	..	..	2.63	2.26	7.58	6.25	..	
Total....	18	15	28	7	1	1	..	..	..	..	4.57	2.86	8.16	5.64	2.7	

## No. IV.

No. 2 (continued).

in Sind during the year 1864-65.

SENTENCE (continued).				IMPRISONMENT.								
Ratio per cent. of Deaths to daily average strength of Prisoners sentenced to imprisonment for				Daily average strength of		Term Prisoners who died on the completion of a confinement of						
Above 10 years.	Civil Prisoners.	Till security is furnished.	Life.	Term Prisoners.	Life Prisoners.	3 months and under.	4 months and above 3 months.	Above 6 months and up to 1 year.	Above 1 year and up to 2 years.	Above 2 years and up to 5 years.	Above 5 years and up to 10 years.	Above 10 years.
17	18	19	20	21	22	23	24	25	26	27	28	29
..	..	..	..	398	6	5	4	1	4	1	..	..
100	..	..	..	498	1	2	13	5	11	1	1	1
..	..	..	..	592	4	7	3	4	3	1	..	..
33.3	..	..	..	1,488	11	14	20	10	23	3	1	1

## APPENDIX

## STATEMENT

*Abstract Return of Mortality in the Jails*

JAILS.	IMPRISONMENT.													
	Life Prisoners who died on the completion of a period of confinement of								Ratio per cent. of Deaths as respects Term Prisoners who died on the completion of a period of confinement of					
	6 months and under.	Above 6 months and up to 1 year.	Above 1 year and up to 2 years.	Above 2 years and up to 5 years.	Above 5 years and up to 10 years.	Above 10 years and up to 20 years.	Above 20 years and up to 30 years.	Above 30 years.	3 months and under.	6 months and above 3 months.	Above 6 months and up to 1 year.	Above 1 year and up to 2 years.	Above 2 years and up to 5 years.	Above 5 years and up to 10 years.
1	2	3	4	5	6	7	8	9	To total daily average strength of Term Prisoners.	To total daily average strength of Term Prisoners.	To total daily average strength of Term Prisoners.	To total daily average strength of Term Prisoners.	To total daily average strength of Term Prisoners.	To total daily average strength of Term Prisoners.
10	11	12	13	14	15									
Kurrachee. . .	..	..	..	..	..	..	..	..	1.26	.1	0.25	1.	0.25	..
Hydrabad. . . .	..	..	..	..	..	..	..	..	0.4	2.61	.1	2.21	0.2	0.2
Shikarpoor ..	..	..	..	..	..	..	..	..	1.18	0.51	0.68	1.35	0.17	..
Total..	..	..	..	..	..	..	..	..	.94	1.34	.67	1.55	.20	.07

No. IV.

No. 2 (continued).

in Sind during the year 1864-65.

									OCCUPATION.					
Ratio per cent. of Deaths as respects Life Prisoners who died on the completion of a period of confinement of									Prior to Imprison.					
Above 10 years.	6 months and under.	Above 6 months and up to 1 year.	Above 1 year and up to 2 years.	Above 2 years and up to 5 years.	Above 5 years and up to 10 years.	Above 10 years and up to 20 years.	Above 20 years and up to 30 years.	Above 30 years.	Daily average strength of			Deat.		
To total daily average strength of Term Prisoners.	To total daily average strength of Life Prisoners.	To total daily average strength of Life Prisoners.	To total daily average strength of Life Prisoners.	To total daily average strength of Life Prisoners.	To total daily average strength of Life Prisoners.	To total daily average strength of Life Prisoners.	To total daily average strength of Life Prisoners.	To total daily average strength of Life Prisoners.	Agriculturists.	Coolies or labourers.	Domestic servants.	Agriculturists.	Coolies or labourers.	Domestic servants.
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
..	..	..	..	..	..	..	..	..	202	185	17	12	3	..
0.2	..	..	..	..	..	..	..	..	96	97	5	30	3	1
..	..	..	..	..	..	..	..	..	412	175	9	9	2	1
0.7	..	..	..	..	..	..	..	..	710	457	31	51	8	2



## APPENDIX

## STATEMENT

*Abstract Return of Mortality in the Jails*

JAILS.	OCCUPATION.														
	Prior to Imprisonment.			During Imprisonment.											
	Ratio per cent. of Deaths to daily average strength of			Daily average strength of											
	Agriculturists.	Coolies or labourers.	Domestic servants.	Labouring Prisoners.								Non-labouring Prisoners.			
				In-door Labourers.				Out-door Labourers.				Total of labouring Prisoners.			
				Employed in manufactures.	Employed as Jail servants or other make-up work.	Employed on light work, being convalescent, weak, or old men.	Total.	Employed on the roads and other out-door work.	Employed in the Jail garden.	Total.	Total of labouring Prisoners.	Sentenced without labour.	Inefficient from age, sickness, or otherwise.	Total.	Prisoners in bajut.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Kurrachee ..	5.94	1.62	..	186	121	6	313	23	4	27	340	7	57	64	..
Hydrabad ..	31.25	3.09	20	18	166	91	275	148	22	170	445	15	16	31	23
Shikarpoor ..	2.18	1.14	11.11	94	21	28	143	432	8	440	583	6	..	6	7
Total..	7.18	1.75	6.45	298	308	125	731	603	34	637	1,368	28	73	101	30

## No. IV.

## No. 2 (continued).

in Sind during the year 1864-65.

## During Imprisonment (continued).

Deaths among											Ratio per cent. of Deaths to strength of						
Labouring Prisoners.							Non-Labouring Prisoners.				Labouring Prisoners.						
In-door Labourers.				Out-door Labourers.			Total of labouring Prisoners.	Sentenced without labour.	Inefficient from age, sickness, or otherwise.	Total.	Prisoners in light.	In-door Labourers.				Out-Labourers.	
Employed in manufactures.	Employed as Jail servants and on other in-door work.	Employed on light work, being convalescent, weak, or old men.	Total.	Employed on the roads and other out-door labour.	Employed in the Jail garden.	Total.						Employed in manufactures &c.	Employed as Jail servants and on other in-door work.	Employed on light labour, being convalescent, weak, or old men.	Total.	Employed on the roads and on other out-door labour.	Employed in the Jail garden.
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
6	5	3	14	1	..	1	15	..	..	..	..	3.23	4.13	50.	4.47	4.35	..
1	7	18	26	2	..	2	28	5	..	5	1	5.55	4.22	19.78	9.45	1.35	..
3	1	6	10	11	1	12	22	..	..	..	1	3.19	4.76	21.43	6.99	2.55	12.5
10	13	27	50	14	1	15	65	5	..	5	2	3.36	4.22	21.6	6.84	2.32	2.94

# APPENDIX

## STATEMENT

### *Abstract Return of Mortality in the Jails*

JAILS.	OCCUPATION. #						LOCALITY OF IMPRISONMENT.					
	During Imprisonment.						Daily average strength of		Deaths among.		Ratio per cent. of Deaths to daily average strength of	
	Ratio per cent. of Deaths to daily average strength of						Prisoners of the district.	Prisoners of other districts.	Prisoners of the district.	Prisoners of other districts.	Prisoners of the district.	Prisoners of other districts.
	Labouring Prisoners (contd.)			Non-labouring Prisoners.								
	Total of out-door labourers.	Total of in-door and out-door Prisoners.	Sentenced without labour.	Inefficient from age, sickness, or otherwise.	Total.	Prisoners in hajat.						
1	2	3	4	5	6	7	8	9	10	11	12	13
Kurrachee..	37	4.41	..	..	..	..	345	59	13	2	3.77	3.39
Hydrabad..	1.18	6.29	33.33	..	16.13	4.35	499	..	34	..	6.81	..
Shikarpoor.	2.73	3.77	..	..	..	14.29	596	..	23	..	3.86	..
Total..	2.35	4.75	17.86	..	4.76	6.66	1,440	59	70	2	4.86	3.39

## No. IV.

## No. 2 (continued).

in Sind during the year 1864-65.

## CRIME.

Daily average strength of						Deaths among						Ratio per cent. of Deaths to average strength			
Thieves.	Dacoits.	Murderers.	Cattle stealers.	Burglars.	Budmashees.	Thieves.	Dacoits.	Murderers.	Cattle stealers.	Burglars.	Budmashees.	Thieves.	Dacoits.	Murderers.	Cattle stealers.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
77	..	26	59	48	186	3	..	..	..	..	12	3.9	..	..	..
158	8	9	..	127	190	26	..	..	..	6	2	16.46	..	..	..
244	9	5	212	117	6	8	..	..	15	..	..	3.28	..	..	7.08
479	17	40	271	292	382	37	..	..	15	6	14	7.72	..	..	5.54

# APPENDIX

## STATEMENT

### *Abstract Return of Mortality in the Jails*

No.  JAILS.	CRIME (contd.)		AGE.											
	Ratio per cent. of Deaths to daily average strength of		Daily average strength of Prisoners.								Deaths among			
	Burglars.	Hudmashas.	Under 20 years.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.	From 50 to 60 years.	From 60 to 70 years.	From 70 to 80 years.	Above 80 years.	Under 20 years.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Kurrachee ....	..	6.45	27	116	175	75	9	2	..	..	1	7	5	1
Hydrabad ....	4.72	1.05	69	230	151	36	9	4	..	..	5	14	10	2
Shikarpoor ....	..	..	31	318	178	60	7	2	..	..	..	8	12	3
Total ....	2.05	3.66	127	664	504	171	25	8	..	..	6	29	27	6

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

## No. IV.

No. 2 (continued).

*in Sind during the year 1864-65.*

Prisoners.				Ratio per cent. of Deaths to daily average strength of Prisoners.								RE MARKS
From 50 to 60 years.	From 60 to 70 years.	From 70 to 80 years.	Above 80 years.	Under 20 years.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.	From 50 to 60 years.	From 60 to 70 years.	From 70 to 80 years.	Above 80 years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
1	..	..	..	3.7	6.03	2.86	1.33	11.11	..	..	..	
2	1	..	..	7.25	6.09	6.62	5.56	22.22	25.	..	..	
..	..	..	..	..	2.52	6.74	5.	..	..	..	..	
3	1	..	..	4.72	4.37	5.36	3.51	12.	12.5	..	..	

C. G. WIEHE, M.D.,  
Inspector General of Prisons.



	Average Admission.	Deaths.		
4 Diseases—				
Dysentery .....	..	4	Brought over. ....	1
Diarrhoea .....	..	13	Earthen potmakers .....	
Fever .....	..	30	Mohurururs .....	
Phthisis .....	..	3	Bhisties .....	
	..	50	Blanketmakers .....	
Ordinary Diseases—			Leathermakers .....	
Pneumonia .....	..	3	Landholders .....	
Anasarca .....	..	1	Songsters .....	
Ascitis .....	..	1	Shopkeepers .....	
Scorbutus .....	..	1	Total. ....	1,495
Bronchitis .....	..	7	6 Occupation at the time of	
Pleuritis .....	..	1	death—	
Enteritis .....	..	1	In-door labourers employed	
Erysipelas .....	..	2	on manufactures. ....	298 10
Atrophy and debility .....	..	5	„ As Jail servants ..	135 2
Total. ....	..	72	„ In miscellaneous	
5 Occupation prior to imprison-			works .....	116 11
ment—			„ As hospital atten-	
Agriculturists .....	710	51	dants .....	11 ..
Labourers .....	157	8	„ In repairing Jails .	46 ..
Servants .....	31	2	Employed on light labour,	
Beggars .....	78	1	such as cleaning Jail	
Tradesmen .....	11	1	compound, weeding grass,	
Chowkedars .....	7	..	levelling grounds, &c ..	.. ..
Barbers .....	17	..	Convalescents, old and weak	
Carpenters .....	7	..	men .....	125 27
Shepherds .....	5	..	Total. ....	731 50
Sweepers .....	7	5	Out-door labourers employed	
Prostitutes .....	26	..	in making bricks .....	10 ..
Washermen .....	2	..	„ Miscellaneous works ..	481 6
Blacksmiths .....	4	..	„ On roads .....	112 8
Zamindars .....	3	1	„ In Jail garden ....	34 1
Goldsmiths .....	17	..	Total. ....	637 15
Tailors .....	2	1	Total of labouring prisoners. .	1,368 65
Putwaries .....	5	..		
Boatmen .....	6	..		
Budmashes .....	16	1		
Butchers .....	27	..		
Carried over. ....	1,438	71		



		Average Admission.	Deaths.			Average No. in Custody.	Deaths.
<b>Non-Labourers.</b>				<b>Brought over....</b>		<b>1,407</b>	<b>72</b>
1	tenced without labour	11			Arson .....	2	
1	prisoners .....	17			Disobedience of legal orders	1	
1	icient from age, sick in				Desertion .....	3	
1	spital since admission,				Destruction of cattle ....	3	
1	d convalescents excus-				Extortion .....	2	
1	- labour .....	73	5		Having in possession coun-		
					terfeit coins .....	2	
	Total....	101	5		Cheating .....	1	
1	Hajut prisoners .....	30	2		Offences against Abkaree		
					and Salt laws .....	1	
1	Grand Total....	1,499	72		Escape from Jail .....	3	
					Breach of peace .....	3	
					Bribery .....	1	
					Voluntarily causing hurt..	15	
					Unnatural crime .....	3	
					Prowling about a house by		
					night .....	35	
					Civil prisoners .....	17	
					Total....	1,499	72
7	Crimes—			8	Sentences—		
	Theft .....	479	37		of 2 Months .....	1	
	Dacoity .....	17			.. 3 Ditto .....	1	
	Burglary .....	292	6		.. 4 Ditto .....	2	
	Murder .....	40			.. 5 Ditto .....	2	
	Cattle stealing .....	271	15		.. 6 Ditto .....	12	
	Culpable homicide ..	10			.. 7 Ditto .....	2	
	Receiving stolen property.	71			.. 9 Ditto .....	3	
	Perjury, or subordination				.. 10 Ditto .....	1	
	of perjury .....	10			.. 1 Year .....	9	
	Assault .....	121	6		.. 1 Ditto and 3 months.	3	
	Wounding .....	3			.. 1 Ditto and 6 do ..	10	
	Plundering .....				.. 2 Years .....	14	
	Highway robbery....	15	2		.. 2 Ditto and 6 months.	2	
	Bad livelihood .....	44	4		.. 3 Years .....	3	
	Rape .....	6	1		.. 3 Ditto and 9 months.	1	
	Rebellion .....	6			.. 4 Years .....	1	
	Assault attended with				.. 10 Ditto .....	1	
	wounding .....				.. 15 Ditto .....	1	
	Larceny .....	8	1		.. 16 Ditto .....	1	
	Neglect of duty .....	9			Hajut prisoners....	2	
	Resisting process .....						
	Embezzlement .....	3					
	Poisoning .....	2					
	Carried over. ...	1,407	72		Grand Total....		72

Complete information was not supplied.

	Average No. in Custody.	Deaths.		
9 Unexpired periods of sen- tence—			Brought over...	
Under 15 days.....	1		9 years and 6 months and above 9 years .....	
1 month & above 15 days.	5		Hajut prisoners .....	
2 months and above 1 month .....	10		Grand Total....	
3 months and above 2 months....	8	10	Age—	
6 months and above 3 months .....	11		18 years .....	
9 months and above 6 months .....	11		19 „ .....	
1 year and above 9 months.	7		22 „ .....	
1 year and 3 months and above 1 year .....	3		23 „ .....	
1 year and 6 months and above 1 year and 3 months....	2		25 „ .....	
1 year and 9 months up to 1 year and 6 months.	1		27 „ .....	
2 years and 6 months and above two years ..	4		28 „ .....	
3 years and above 2 years and 6 months .....	1		29 „ .....	
3 years and 6 months and above 3 years .....	1		31 „ .....	
7 years & above 6 years and 6 months .....	1		32 „ .....	
			34 „ .....	
			35 „ .....	
			37 „ .....	
			40 „ .....	
			47 „ .....	
			48 „ .....	
			57 „ .....	
			58 „ .....	
			70 „ .....	
Carried over....	39		Total...	72

Complete information was not supplied.

Complete information was not supplied.

C. G. WIEHE, M.D.,

Inspector General of Prisons.

*Inspector General of Prisons' Office,**Poona, 20th February 1866.*

## APPENDIX I

## STATEMENT No. 4.

**COMPARATIVE STATEMENT** showing the number of Admissions and Deaths in the Jail Hospitals in the years 1863-64 and 1864-65, according to the classification of the Registrar General of England.

JAILS.	Zymotic diseases.	Constitutional diseases.	Local diseases.	Developmental diseases.	Violent diseases.	Epidemic Cholera.	Treatment after punishment.	Total admissions in each year.	DEATHS.			Average strength of Prisoners.	Ratio per cent. of sick to strength.	RATIO PER CENT. OF						REMARKS.	
									By ordinary diseases.	By Cholera.	Total.			Deaths to strength.			Deaths to treated.				
														By ordinary diseases.	By Cholera.	Total.	By ordinary diseases.	By Cholera.	Total.		
Kurrachee, 1863-64	1,535	5	495	9	531	..	6	2,581	184	..	184	927	278.42	19.85	..	19.85	7.13	..	7.13	7.13	
1864-65	275	..	99	2	16	1	2	395	15	..	15	404	97.77	3.71	..	3.71	3.8	..	3.8	3.8	
Hydrabad, 1863-64	335	..	67	10	5	..	..	417	20	..	20	478	87.24	4.18	..	4.18	4.8	..	4.8	4.8	
1864-65	478	4	98	3	9	..	7	599	24	..	34	499	120.04	6.81	..	6.81	5.68	..	5.68	5.68	
Shikarpoor, 1863-64	456	..	179	10	10	..	..	655	20	..	20	470	139.36	4.26	..	4.26	3.05	..	3.05	3.05	
1864-65	484	1	150	5	18	..	..	658	23	..	23	596	110.4	3.86	..	3.86	3.5	..	3.5	3.5	

Inspector General of Prisons' Office,  
Poona, 20th February 1866.

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

## APPENDIX No. VII.

## STATEMENT No. 5

*DEATHS in the Jails in Sind from all Causes during  
year 1864-65.*

## ABSTRACT STATEMENT.

CAUSES OF DEATH.		Under 20 years of Age.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.	From 50 to 60 years.	From 60 to 70 years.	From 70 to 80 years.	From 80 years and upwards.	Total.
All causes .....		6	31	25	6	3	1	..	..	72
Specified causes .....		6	31	25	6	3	1	..	..	72
CLASSES.										
Class.	I. Zymotic diseases ..	4	22	18	4	2	..	..	..	50
	II. Constitutional ....	1	3	..	..	..	..	..	..	4
	III. Local.....	1	5	4	2	1	1	..	..	14
	IV. Developmental ....	..	..	1	..	..	..	..	..	1
	V. Violent deaths ....	..	1	2	..	..	..	..	..	3
ORDERS.										
I.	1 Miasmatic diseases. .	4	22	18	4	2	..	..	..	50
	2 Enthetic .....	..	..	..	..	..	..	..	..	..
	3 Dietic .....	..	..	..	..	..	..	..	..	..
	4 Parasitic .....	..	..	..	..	..	..	..	..	..
II.	1 Diathetic diseases ..	1	..	..	..	..	..	..	..	1
	2 Phthisis .....	..	3	..	..	..	..	..	..	3

## CAUSES OF DEATH.

		Under 20 years of Age.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.	From 50 to 60 years.	From 60 to 70 years.	From 70 to 80 years.	From 80 years and upwards.	Total of all Ages.
	Diseases of Nervous System .....	..	..	..	..	..	..	..	..	..
	Diseases of Organs of Circulation .....	..	..	..	..	..	..	..	..	..
	Diseases of Respira- tory Organs .....	1	5	3	1	..	1	..	..	11
	Diseases of Digestive Organs .....	..	..	1	1	..	..	..	..	2
	Diseases of Urinary Organs .....	..	..	..	..	..	..	..	..	..
	Diseases of Organs of Generation .....	..	..	..	..	..	..	..	..	..
	Diseases of Organs of Locomotion .....	..	..	..	..	..	..	..	..	..
	Diseases of Integu- mentary system ..	..	..	..	..	1	..	..	..	1
IV.	1 Diseases of Children.	..	..	..	..	..	..	..	..	..
	2 Diseases of Adults ..	..	..	..	..	..	..	..	..	..
	3 Diseases of Old Peo- ple .....	..	..	..	..	..	..	..	..	..
	4 Diseases of Nutrition	..	..	1	..	..	..	..	..	1
V.	1 Accident .....	..	..	..	..	..	..	..	..	..
	2 Battle .....	..	..	..	..	..	..	..	..	..
	3 Homicide .....	..	..	..	..	..	..	..	..	..
	4 Suicide .....	..	..	..	..	..	..	..	..	..
	5 Execution .....	..	..	..	..	..	..	..	..	..
	Other violent deaths, not classed .....	..	1	2	..	..	..	..	..	3
	Sudden deaths, causes unascertained .....	..	..	..	..	..	..	..	..	..
	Causes not specified ..	..	..	..	..	..	..	..	..	..

Inspector General of Prisons' Office,  
Poona, 20th February 1866.

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

## APPENDIX No. VIII.

## STATEMENT No. 6.

*DEATHS in the Jails in Sind from all Causes during  
year 1864-65.*

## GENERAL STATEMENT.

CLASS.	CAUSES OF DEATH.	Under 20 years of Age.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.	From 50 to 60 years.	From 60 to 70 years.	From 70 to 80 years.	From 80 years and upwards	TOTAL
I.	ORDER I.									
	1 Small Pox .....	..	..	..	..	..	..	..	..	..
	2 Measles .....	..	..	..	..	..	..	..	..	..
	3 Scarlatina .....	..	..	..	..	..	..	..	..	..
	4 Quinsy .....	..	..	..	..	..	..	..	..	..
	5 Croup .....	..	..	..	..	..	..	..	..	..
	6 Hooping Cough .....	..	..	..	..	..	..	..	..	..
	7 Typhus and Infantile Fever .....	..	..	..	..	..	..	..	..	..
	8 Erysipelas .....	..	2	..	..	..	..	..	..	2
	9 Metria .....	..	..	..	..	..	..	..	..	..
	10 Carbuncle .....	..	..	..	..	..	..	..	..	..
	11 Influenza .....	..	..	..	..	..	..	..	..	..
	12 Dysentery .....	..	2	2	..	..	..	..	..	4
	13 Diarrhoea .....	..	5	7	..	1	..	..	..	13
	14 Cholera .....	..	..	..	..	..	..	..	..	..
	15 Ague .....	4	9	6	3	1	..	..	..	23
	16 Remittent Fever .....	..	3	1	1	..	..	..	..	5
	17 Rheumatism .....	..	..	..	..	..	..	..	..	..
	18 Pycemia .....	..	..	..	..	..	..	..	..	..
	19 Anthrax .....	..	1	2	..	..	..	..	..	3
	20 Beri-beri .....	..	..	..	..	..	..	..	..	..
	Carried over .....	4	22	18	4	2	..	..	..	50

CAUSES OF DEATH.		Under 20 years of Age.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.	From 50 to 60 years.	From 60 to 70 years.	From 70 to 80 years.	From 80 years and upwards.	Total of all Ages.
Brought forward....		4	22	18	4	2	..	..	..	50
ORDER II.										
Syphilis .....		..	..	..	..	..	..	..	..	..
Hydrophobia .....		..	..	..	..	..	..	..	..	..
Leprosy .....		..	..	..	..	..	..	..	..	..
ORDER III.										
1 Privation .....		..	..	..	..	..	..	..	..	..
2 Want of breast milk..		..	..	..	..	..	..	..	..	..
3 Purpura and Scurvy..		..	..	..	..	..	..	..	..	..
4 Alcoholism ( <i>Del. tremens</i> ), &c.....		..	..	..	..	..	..	..	..	..
5 Tumour (of the prostate gland) .....		..	..	..	..	..	..	..	..	..
ORDER IV.										
1 Thrush .....		..	..	..	..	..	..	..	..	..
2 Worms, &c. ....		..	..	..	..	..	..	..	..	..
II. ORDER I.										
1 Gout .....		..	..	..	..	..	..	..	..	..
2 Dropsy .....		..	..	..	..	..	..	..	..	..
3 Anasarca .....		1	..	..	..	..	..	..	..	1
4 Cachexia .....		..	..	..	..	..	..	..	..	..
5 Hydrothorax .....		..	..	..	..	..	..	..	..	..
6 Cancer .....		..	..	..	..	..	..	..	..	..
7 Anæmia .....		..	..	..	..	..	..	..	..	..
8 Carcinomæ .....		..	..	..	..	..	..	..	..	..
9 Gangrene .....		..	..	..	..	..	..	..	..	..
10 Mortification .....		..	..	..	..	..	..	..	..	..
11 Otitis .....		..	..	..	..	..	..	..	..	..
Carried over....		5	22	18	4	2	..	..	..	51

CLASS.	CAUSES OF DEATH.	Under 20 years of Age.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.	From 50 to 60 years.	From 60 to 70 years.	From 70 years.	
	Brought forward . . . .	5	22	18	4	2	..	..	
	ORDER II.								
	1 Scrofula . . . . .	..	..	..	..	..	..	..	
	2 Tabes Mesenterica . .	..	..	..	..	..	..	..	
	3 Tubercle or Phthisis .	..	3	..	..	..	..	..	
	1 Hydrocephalus . . . .	..	..	..	..	..	..	..	
III.	ORDER I.	.				.			
	1 Cephalitis . . . . .	..	..	..	..	..	..	..	..
	2 Apoplexy . . . . .	..	..	..	..	..	..	..	..
	3 Paralysis . . . . .	..	..	..	..	..	..	..	..
	4 Insanity . . . . .	..	..	..	..	..	..	..	..
	5 Cholera . . . . .	..	..	..	..	..	..	..	..
	6 Epilepsy . . . . .	..	..	..	..	..	..	..	..
	7 Convulsions . . . . .	..	..	..	..	..	..	..	..
	8 Puerperal convulsions .	..	..	..	..	..	..	..	..
	9 Staphyloma . . . . .	..	..	..	..	..	..	..	..
	10 Ophthalmia . . . . .	..	..	..	..	..	..	..	..
	11 Meningitis . . . . .	..	..	..	..	..	..	..	..
	12 Brain diseases, &c . .	..	..	..	..	..	..	..	..
	13 Scirrhus . . . . .	..	..	..	..	..	..	..	..
	ORDER II.								
	1 Pericarditis . . . . .	..	..	..	..	..	..	..	..
	2 Endocarditis . . . . .	..	..	..	..	..	..	..	..
	3 Aneurism . . . . .	..	..	..	..	..	..	..	..
	4 Phlebitis . . . . .	..	..	..	..	..	..	..	..
	5 Syncope . . . . .	..	..	..	..	..	..	..	..
	6 Heart diseases, &c . .	..	..	..	..	..	..	..	..
	Carried over . . . .	5	25	18	4	2	..	..	54



CAUSES OF DEATH.		Under 20 years of Age.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.	From 50 to 60 years.	From 60 to 70 years.	From 70 to 80 years.	From 80 years and upwards.	Total of all Ages
Brought forward..		5	25	18	4	2	..	..	..	54
ORDER III.										
1	Laryngitis .....	..	..	..	..	..	..	..	..	..
2	Bronchitis .....	1	4	1	..	..	1	..	..	7
3	Empyema .....	..	..	..	..	..	..	..	..	..
4	Pleuritis .....	..	..	1	..	..	..	..	..	1
5	Asthma .....	..	..	..	..	..	..	..	..	..
6	Pneumonia .....	..	1	1	1	..	..	..	..	3
7	Lung diseases, &c. . .	..	..	..	..	..	..	..	..	..
8	Hemoptysis.....	..	..	..	..	..	..	..	..	..
ORDER IV.										
1	Gastritis .....	..	..	..	..	..	..	..	..	..
2	Enteritis .....	..	..	1	..	..	..	..	..	1
3	Peritonitis .....	..	..	..	..	..	..	..	..	..
4	Ascites .....	..	..	..	1	..	..	..	..	1
5	Ulceration of Intes- tines.....	..	..	..	..	..	..	..	..	..
6	Hernia .....	..	..	..	..	..	..	..	..	..
7	Ileus .....	..	..	..	..	..	..	..	..	..
8	Intussusception .....	..	..	..	..	..	..	..	..	..
9	Hemorrhoids .....	..	..	..	..	..	..	..	..	..
10	Stricture of Intestines.	..	..	..	..	..	..	..	..	..
11	Fistula .....	..	..	..	..	..	..	..	..	..
12	Stomach diseases, &c.	..	..	..	..	..	..	..	..	..
13	Pancreas diseases, &c.	..	..	..	..	..	..	..	..	..
14	Melena .....	..	..	..	..	..	..	..	..	..
15	Hepatitis .....	..	..	..	..	..	..	..	..	..
16	Jaundice .....	..	..	..	..	..	..	..	..	..
17	Liver diseases, &c. . .	..	..	..	..	..	..	..	..	..
18	Spleen diseases, &c..	..	..	..	..	..	..	..	..	..
Carried over....		6	30	22	6	2	1	..	..	67

CLASS.	CAUSES OF DEATH.	Under 20 years of Age.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.	From 50 to 60 years.	From 60 to years.	From 70 years.	F.
	Brought forward . . . .	6	30	22	6	2	1	..	.
	<b>ORDER V.</b>								
	1 Nephritis . . . . .	..	..	..	..	..	..	..	
	2 Ischuria . . . . .	..	..	..	..	..	..	..	
	3 Diabetes . . . . .	..	..	..	..	..	..	..	.
	4 Stone . . . . .	..	..	..	..	..	..	..	..
	5 Cystitis . . . . .	..	..	..	..	..	..	..	..
	6 Stricture of Urethra .	..	..	..	..	..	..	..	..
	7 Extravasation of Urine	..	..	..	..	..	..	..	..
	8 Kidney diseases, &c..	..	..	..	..	..	..	..	..
	<b>ORDER VI.</b>								
	1 Ovarian Dropsy . . . .	..	..	..	..	..	..	..	..
	2 Uterine diseases, &c .	..	..	..	..	..	..	..	..
	<b>ORDER VII.</b>								
	1 Arthritis . . . . .	..	..	..	..	..	..	..	..
	2 Tetanus . . . . .	..	..	..	..	..	..	..	..
	3 Mollities Ossium . . . .	..	..	..	..	..	..	..	..
	4 Joint diseases, &c. . .	..	..	..	..	..	..	..	..
	<b>ORDER VIII.</b>								
	1 Phlegmon . . . . .	..	..	..	..	..	..	..	..
	2 Abscess . . . . .	..	..	..	..	..	..	..	..
	3 Ulcer . . . . .	..	..	..	..	..	..	..	..
	4 Skin diseases, &c. . . .	..	..	..	..	..	..	..	..
	5 Scorbutus . . . . .	..	..	..	..	1	..	..	1
	Carried over . . . .	6	30	22	6	3	1	..	68

USES OF DEATH.		Under 20 years of Age.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.	From 50 to 60 years.	From 60 to 70 years.	From 70 to 80 years.	From 80 years and upwards.	Total of all Ages.
	Brought over ....	6	30	22	6	3	1	..	..	68
	ORDER I.									
	Premature Birth ....	..	..	..	..	..	..	..	..	..
	Cyanosis .....	..	..	..	..	..	..	..	..	..
	Spina Bifida .....	..	..	..	..	..	..	..	..	..
	Other malformations ..	..	..	..	..	..	..	..	..	..
	5 Teething .....	..	..	..	..	..	..	..	..	..
	6 Myelitis .....	..	..	..	..	..	..	..	..	..
	ORDER II.									
	1 Paramenia .....	..	..	..	..	..	..	..	..	..
	2 Childbirth ( <i>see</i> Metria).	..	..	..	..	..	..	..	..	..
	ORDER III.									
	1 Old age .....	..	..	..	..	..	..	..	..	..
	ORDER IV.									
	1 Atrophy and debility.	..	..	1	..	..	..	..	..	1
	2 Asthemia .....	..	..	..	..	..	..	..	..	..
V.	ORDER I.									
	( <i>Accident.</i> )									
	1 Fractures & contusions	..	..	..	..	..	..	..	..	..
	2 Wounds .....	..	..	..	..	..	..	..	..	..
	3 Burns and scalds ..	..	..	..	..	..	..	..	..	..
	4 Poison .....	..	..	..	..	..	..	..	..	..
	5 Drowning .....	..	..	..	..	..	..	..	..	..
	6 Suffocation .....	..	..	..	..	..	..	..	..	..
	7 By bite of snake ....	..	..	..	..	..	..	..	..	..
	8 While digging a tank.	..	..	..	..	..	..	..	..	..
	9 Shot .....	..	..	..	..	..	..	..	..	..
	10 Hanging .....	..	..	..	..	..	..	..	..	..
	11 Otherwise.....	..	..	..	..	..	..	..	..	..
	Carried over ....	6	30	23	6	3	1	..	..	69

CLASS.	CAUSES OF DEATH.	Under 20 years of Age.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.	From 50 to 60 years.	From 60 to 70 years.	From 70 years and over.
	Brought forward..	6	30	23	6	3	1	..
	* ORDER III. (Homicide.)							
	1 Murder and Man-slaughter .....	..	..	..	..	..	..	..
	ORDER IV. (Suicide.)							
	1 Wounds— { Gun-shot.	..	..	..	..	..	..	..
	{ Cut-throat.	..	..	..	..	..	..	..
	2 Poison .....	..	..	..	..	..	..	..
	3 Drowning .....	..	..	..	..	..	..	..
	4 Hanging .....	..	..	..	..	..	..	..
	5 Otherwise .....	..	..	..	..	..	..	..
	ORDER V. (Execution.)							
	1 Hanging .....	..	..	..	..	..	..	..
	Other violent deaths (not classed) .....	..	1	2	..	..	..	3
	Sudden deaths, causes unascertained .....	..	..	..	..	..	..	..
	Causes not specified or ill-defined .....	..	..	..	..	..	..	..
	Total ....	6	31	25	6	3	1	..
								72

\* Order II. comprises deaths in battle, and is, therefore, inapplicable to the above body of men.

Inspector General of Prisons' Office,  
Poona, 20th February 1866.

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

## STATEMENT No. 7.

112

YEARS.	RATIO PER CENT. OF													
	Deaths.				Deaths to Strength.				Deaths to Strength.				Deaths to Strength.	
	By Cholera.		By Ordinary Diseases.		By Cholera.		By Ordinary Diseases.		By Cholera.		By Ordinary Diseases.		By Cholera.	
1855	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1856	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1857	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1858	121	3	67	11	9	18	41	26	403	22	22	22	22	22
1859	163	10	148	19	13	18	26	71	599	22	22	22	22	22
1860	202	19	128	12	17	3	21	29	559	6	5	11	509	30
1861	315	20	139	29	11	6	41	4	619	10	2	12	602	10
1862	374	24	189	36	38	29	42	4	1,218	17	17	17	704	17
1863	497	31	203	460	45	50	75	9	1,833	30	30	30	904	15
1863-64	1,189	15	195	531	38	56	64	6	2,581	184	184	184	927	71
1864-65	2,861	21	1,069	1,429	171	180	313	149	7,897	291	291	291	4,558	653
1865	181	5	49	16	10	23	13	2	395	15	15	15	404	371

## APPENDIX No. IX.

## STATEMENT No. 7 (continued).

TABLE showing the Number of Admissions and Deaths in each Jail Hospital in Sind during the 10 years from 1855, specifying the Causes of Mortality in each year, together with the Decennial Rate and the Mortality of 1864-65.

Hydrabad Jail.

YEARS.	RATIO PER CENT. OF																										
	Fever.	Dysentery of the Lungs.	Dysentery of the Liver.	Dysentery of the Stomach and Bowels.	Epidemic Cholera.	Dysentery of the Brain.	Rheumatic Affections.	Venereal Affections.	Abscesses and Ulcers.	Wounds and Injuries.	Dysentery of the Skin.	Other Diseases.	Treatment after punishment.	Total Admissions in each year.	DEATHS.			Average Strength of Prisoners.	Sick to Strength.	Deaths to Strength.				Deaths to Treated.			
															By ordinary Diseases.	By Cholera.	Total.			By ordinary Diseases.	By Cholera.	Total.	By ordinary Diseases.	By Cholera.	Total.		
1855	374	2	44	10	97	4	58	20	147	18	20	14	61	21	893	4	1	341	262	1.14	0.45	1.14	0.45	1.14	0.45	1.14	0.45
1856	447	..	48	10	57	4	60	13	109	18	19	18	46	75	923	12	1	386	240	3.11	1.30	3.11	1.30	3.11	1.30	3.11	1.30
1857	288	..	47	4	89	20	72	9	133	15	20	9	49	28	783	15	1	377	208	3.78	1.91	3.78	1.91	3.78	1.91	3.78	1.91
1858	212	..	32	5	27	3	16	6	112	15	21	6	24	5	624	18	1	377	127	4.77	3.77	4.77	3.77	4.77	3.77	4.77	3.77
1859	268	..	61	4	76	6	36	15	99	13	18	1	23	5	624	18	1	385	163	2.86	1.75	2.86	1.75	2.86	1.75	2.86	1.75
1860	108	..	18	4	25	5	22	11	56	11	2	2	2	3	289	10	1	404	72	2.48	3.64	2.48	3.64	2.48	3.64	2.48	3.64
1861	103	..	31	3	37	3	2	7	36	10	2	2	2	..	272	11	1	484	56	3.09	0.30	3.09	0.30	3.09	0.30	3.09	0.30
1862	321	25	16	2	93	5	2	47	11	99	7	15	4	2	673	14	1	475	156	3.35	..	3.35	..	3.35	..	3.35	..
1863	156	..	20	1	79	4	1	17	12	74	14	7	10	215	639	17	1	401	112	4.73	..	4.73	..	4.73	..	4.73	..
1863-64	179	8	26	2	72	2	..	25	7	36	10	8	5	37	417	20	..	478	0.8	0.6	0.7	0.6	0.6	0.7	0.6	0.7	
	2,492	35	343	44	652	5	53	15	360	901	121	132	71	324	6,001	135	1	4,108	146	2.30	0.02	2.30	0.02	2.30	0.02	2.30	0.02
1864-65	337	2	28	3	87	..	2	3	24	43	7	9	3	30	7	34	..	..	..	..	..	..	..	..	..	..	..

## APPENDIX No. 1A.

## STATEMENT No. 7 (continued).

and during the 10 years from 1864-65

TABLE showing the Number of Admissions and Deaths in each Jail Hospital in Sind during the 10 years from 1864-65, specifying the Causes of Mortality in each year, together with the Decennial Rate and the Mortality of 1864-65.

Shikarpoor Jail.

YEARS.	DEATHS.																								RATIO PER CENT. OF					
	Fever.	Eruptive Fevers.	Diseases of the Lungs.	Diseases of the Stomach and Bowels.	Epidemic Cholera.	Diseases of the Brain.	Dropsy.	Rheumatic Affection.	Venereal Affection.	Abscesses and Ulcers.	Wounds and Injuries.	Diseases of the Eye.	Diseases of the Skin.	Other Diseases.	Discharged after punishment.	Total admissions in each year.	By ordinary Diseases.		By Cholera.	Deaths to Strength.		Deaths to Strength.		Total.	By ordinary Diseases.	By Cholera.	Total.			
																	Total.	By Cholera.		Sick to Strength.	By ordinary Diseases.	By Cholera.	Total.							
1852	301	17	4	68	8	3	27	9	18	21	2	521	12	105	105	409	151.8	2.9	..	2.9	1.9	..	1.9	..	1.9	..	1.9	..	1.9	
1853	1,195	114	10	351	11	7	82	13	252	25	15	10	92	6	2,213	105	571	357.9	18.3	..	18.3	4.7	..	4.7	..	4.7	..	4.7	..	4.7
1854	281	57	2	176	32	5	74	3	257	18	40	36	90	11	1,064	50	477	223.0	10.5	..	10.5	4.6	..	4.6	..	4.6	..	4.6	..	4.6
1855	83	6	..	42	5	..	5	5	63	2	5	..	40	2	260	11	311	80.0	3.5	..	3.5	4.4	..	4.4	..	4.4	..	4.4	..	4.4
1856	64	16	..	73	2	..	1	9	10	5	15	6	38	9	252	9	357	87.4	2.5	..	2.5	2.8	..	2.8	..	2.8	..	2.8	..	2.8
1857	79	1	8	49	4	1	12	1	33	7	15	2	29	..	241	10	377	64.7	2.6	..	2.6	4.1	..	4.1	..	4.1	..	4.1	..	4.1
1858	223	15	3	74	3	1	18	2	31	3	15	1	32	..	421	12	391	107	3.0	..	3.0	2.9	..	2.9	..	2.9	..	2.9	..	2.9
1859	193	29	2	115	5	1	16	7	78	6	21	..	51	..	524	14	341	149.4	4.0	..	4.0	2.7	..	2.7	..	2.7	..	2.7	..	2.7
1860	313	4	19	186	9	..	39	11	109	9	11	8	29	1	736	18	447	168.1	4.0	..	4.0	2.4	..	2.4	..	2.4	..	2.4	..	2.4
1861	284	27	6	147	9	..	36	7	95	9	8	8	19	..	653	20	470	139.5	4.2	..	4.2	3.0	..	3.0	..	3.0	..	3.0	..	3.0
1862-64	3,018	5,308	37	1,281	88	18	316	71	926	107	181	84	41	31	6,912	261	4,154	166.59	6.28	..	6.28	3.78	..	3.78	..	3.78	..	3.78	..	3.78
1864-65	332	89	4	108	7	1	4	7	55	6	7	5	33	..	658	23	596	110.4	3.86	..	3.86	3.5	..	3.5	..	3.5	..	3.5	..	3.5

Inspector General of Prisons' Office,

Poona, 20th February 1865.

C. G. WIEHE, M.D.,

Inspector General of Prisons.

# APPENDIX No. X.

## STATEMENT No. 8.

*Showing the PARTICULARS of ADMISSIONS, DISCHARGE, &c., of PRISONERS of all Classes in the JAILS in SIND during the year 1864-65.*

Jails.	ADMISSIONS.															DISCHARGES, &c.			
	Committed to Jail by order of the Magisterial Authorities in the District.	Do. d. of the Civil, Revenue, and Abkari Authorities in ditto.	Do. under Sentence of Courts-Martial.	Do. under Special Orders of Government.	Do. d. of Jail Commissioners.	Do. recaptured after escape.	Transferred from other Districts for Trial.	Do. do. for Punishment.	Do. do. for Transportation.	Do. do. for Want of Health.	Do. do. for Release.	Do. do. for special reasons.	Do. do. after Receipture.	Do. do. from Sub-division Lock-ups to Sudder Jail.	Kept in Jail while on the way from one District to another.	Total of Admissions.	Acquitted after Trial by the Magisterial Authorities in the District.	Do. by the Session Judge.	Do. by the Sudder Court.
Kurrachee ....	629	224	2	..	..	..	..	..	83	..	..	..	..	..	6	944	14	27	..
Hyderabad ....	1,628	54	3	..	..	..	..	..	..	..	..	..	..	..	247	1,932	740	1	..
Shikarpoor ....	733	19	..	..	..	..	..	..	..	..	..	..	..	..	..	752	..	..	..
Total....	2,990	297	5	..	..	..	..	..	83	..	..	..	..	..	..	..	..	..	..

JAILS.



# STATEMENT No. 8—(Continued)

and during the year from

DISCHARGES, REMOVALS, RELEASES, TRANSFERS, &c.

6

Jails.	Libertated by order of Government.	Released on expiry of sentence.	Do. on payment of debts, &c.	Do. for good conduct.	Do. for extreme sickness.	Do. under the provisions of Inspector General's Circular Order No. 65 of 2nd April 1907.	Transferred to other districts for confinement.	Do. for Banishment.	Do. for Transportation.	Do. for Benefit of Health.	Do. for Release.	Do. for Special Reasons.	Do. after recapture in the District.	Do. to Lunatic Asylums.	Do. from Sub-division Lock-ups to Sudder Dais.	Kept in Jail while in transit from one District to another.	Escaped.	Die.	Executed.	Total of Discharges, Removals, &c.
Kurrachee ....	4	473	176	..	..	..	239	..	23	..	..	..	..	1	..	6	5	15	..	1,044
Hyderabad ....	..	728	93	..	..	..	531	..	..	..	..	..	..	..	..	..	7	34	6	2,158
Shikarpoor ....	..	493	18	..	..	..	..	..	..	..	..	..	..	1	..	..	2	23	5	633
Total....	4	1,694	287	..	..	..	770	..	24	..	..	..	..	2	..	6	14	72	11	3,835

C. G. WIEHE, M.D.,

Inspector General of Prisons.

Inspector General of Prisons' Office,  
Poona, 20th February 1906.

## APPENDIX N<sup>o</sup> XI.

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## APPENDIX

## STATEMENT

*STATEMENT showing the state of Education of the Prisoners*

Prisoners Jails.	Labouring Prisoners who can read and write.						Non-labouring Prisoners who can read and write.					
	Hindus.		Musulmans.		Other Denominations.		Hindus.		Musulmans.		Other Denominations.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Kurrachee .....	4	..	2	..	2	..	..	..	..	..	..	..
Hydrabad .....	23	..	6	..	..	..	6	..	..	..	..	..
Shikarpoor .....	7	..	1	..	..	..	..	..	..	..	..	..
Total....	34	..	9	..	2	..	6	..	..	..	..	..

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

## No. XI.

## No. 9.

*admitted into the Jails in Sind during the year 1864-65*

Civil Prisoners who can read and write.						Total of Prisoners who can read and write.				Prisoners well educated for their position in life.				Prisoners altogether ignorant and uneducated.				Grand Total.				REMA
Hindus.		Muslims.		Other Denominations.																		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
3	..	1	..	2	..	11	..	11	..	895	21	923	21									
..	..	..	..	..	..	35	..	15	..	1,815	37	1,895	37									
3	..	..	..	..	..	11	..	11	..	707	23	729	23									
6	..	1	..	2	..	60	..	40	..	3,417	81	3,547	81									

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

## APPENDIX No. XII.

## STATEMENT No. 10.

*ANALYSIS of the Occupation and Caste of Prisoners admitted into the Jails in Sind during the year 1864-65.*

3,628 admissions into the Jails during the year there were

s —

Occupation prior to Imprisonment.	Kurrachee.	Hydrabad.	Shikarpoor.	Occupation prior to Imprisonment.	Kurrachee.	Hydrabad.	Shikarpoor.
	No records.			Brought forward..	..	1,487	691
Agriculturists .....		461	437				
Labourers .....		307	161	Boatmen .....		60	5
Servants .....		25	2	Budmashes .....		207	4
Weavers .....		10	..	Butchers .....		2	1
Shopkeepers .....		..	23	Earthen-pot makers ..		2	..
Beggars .....		150	..	Dufferies .....		1	..
Fishermen .....		196	9	Blanket makers .....		3	..
Tradesmen .....		67	..	Bhistees .....		5	..
Basket maker .....		..	1	Russoy Brahmins ....		2	..
Chowkedars .....		2	..	Havildar .....		1	..
Priests .....		..	1	Leather makers .....		4	..
Peons .....		9	1	Landholders .....		2	..
Barbers .....		7	3	Bricklayers .....		4	..
Carpenters .....		5	5	Dyers .....		..	3
Shepherds .....		97	36	Mat makers .....		12	..
Prostitutes .....		2	1	Khallasces .....		5	..
Melhters .....		7	..	Wine sellers .....		2	..
Writers .....		..	5	Sweepers .....		21	48
Washermen .....		4	5	Mahajuns .....		25	..
Blacksmiths .....		3	..	Sweetmeat sellers .....		2	..
Zemindars .....		117	..	Sugar sellers .....		5	..
Goldsmiths .....		2	1	Wood cutters .....		27	..
Tailors .....		5	..	Vegetable sellers .....		2	..
Patwaries .....		4	..	Baparies .....		17	..
Mohurers .....		2	..	Khismutgars .....		14	..
Sepoys .....		5	..	Brokers .....		20	..
Carried over....	..	1,487	691	Total....	..	1,932	752

	Kurrachee.	Hydrabad.	Shikarpoor.		Kurrachee.	Hydrabad.	Shikarpoor.
<i>Castes of Hindus.</i>				Brought forward..	770		
Hindus .....	..	..	46	Desert country .....	..		
Brahmins .....	5	2	..	Sindies .....	..		
Lohana .....	75	..	..	Hill country .....	..		
Jats .....	3	..	..	Total ...	770		
Sooas .....	10	..	..				
Kayets .....	5	..	..	Castes—			
Purwaries .....	27	..	..	Christians .....	..	..	
Mangs .....	3	..	..	Europeans .....	12	..	
Mochees .....	3	..	..	Natives .....	10	..	
Bheels .....	13	..	..				
Bunyas .....	..	18	..				
Amill .....	..	7	..				
Total ...	144	27	46	Total ...	22	..	..
Castes—							
Mahomedans .....	..	..	702	Other denominations..	..	..	3
Mohanas .....	120	..	..	Parsees .....	3	..	..
Beelochees .....	255	268	..	Jews .....	5	..	..
Bhungies .....	90	..	..	Sweepers .....	..	10	..
Khaskheles .....	70	..	..	Bheels .....	..	2	..
Syud and Shaik .....	65	..	..	Colee .....	..	1	..
Seeders .....	9	..	..	Thorce .....	..	2	..
Sanpajas .....	160	..	..	Total ...	8	15	3
Carried over..	770	268	702	Total of all classes..	944	1,932	752

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*



## No. XIII.

No. 11.

*of Prisoners in the Jails in Sind during the years 1863-64 and 1864-*

1864-65.																			
11	Number escaped during the year.										Total number recaptured of				19	20	REMARKS		
Average daily number of Prisoners during the year.	12	13	14	15	16	17	18					Remainng uncaptured.	Amount of Reward, paid for recapture.						
	From inside the Jail.	From outside the Jail.	From Hospital.	From Sub-division Lock up.	Total	1864-65	Former years												
								M.	F.	M.	F.			M.	F.	M.		F.	
404	1..	4..	..	..	5..	2..	..	5	..	..	..	..	..	..	..	..			
499	..	6..	1..	..	7..	2..	..	11	..	..	..	..	..	..	..	..			
596	..	2..	..	..	2..	..	2	1	..	..	..	..	..	..	..	..			
1,499	1..	12..	1..	..	14..	4..	2..	20	..	..	..	..	..	..	..	..			

C. G. WIEHE, M.D.,  
Inspector General of Prisons.



## APPENDIX

## STATEMENT

*Showing the Number, Crimes, &c., of Prisoners who*

NAME OF JAIL.	Crime for which the Prisoners were recommitted to Jail.															
	Total number.	Theft.	Assault.	Burglary.	Receiving stolen property.	Cattle stealing.	Escape.	Bad livelihood.	Contempt of Court.	House trespass.	Illegal assemblage.	Affray.	Plunder.	Absoconding.	Riot.	False complaint.
Kurrachee .....																
Hyderabad .....	7529	6	5	2	9	1	11		4						4	
Shikarpoor .....	25	4	2	1	2	5		4	0							
Total ....	10033	8	10	4	14	1	15		10						4	



## APPENDIX

## STATEMENT

*Showing the Number, Crimes, &c., of Prisoners who*

NAME OF JAIL	Their previous Crime.							Sentences awarded on recommitment					Sentences that were awarded for their previous Crimes.										
	Assault with wounding	Murder	Riot attended with wounding	False personation.	Attempt at theft	Resistance of process	Criminal force	Oppression	3 months and under	From 3 months and less than 6 months.	From 6 months and less than 1 year	From 1 year and less than 2 years.	From 2 years and less than 5 years	From 5 years and less than 10 years	From 10 years and above	3 months and under.	From 3 months and less than 6 months.	From 6 months and less than 1 year.	From 1 year and less than 2 years.	From 2 years and less than 5 years.	From 5 years and less than 10 years	From 10 years and above	Has not released
Kurrachee .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hyderbaad .....	..	..	..	9	..	2	..	..	..	16	30	29	..	..	..	92	15	11	19	..	..	..	..
Shikarpoor .....	..	..	..	..	..	..	..	..	..	17	7	..	..	..	..	1	2	1	10	12	..	..	..
Total....	..	..	..	9	..	2	..	..	..	33	37	29	..	..	..	1	91	22	25	23	19	..	..

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

## No. XIV.

No. 12 (continued).

*were committed to Jail in Sind during the year 1864-65.*

Period during which the Prisoners were at large.											REMARKS.
Under 15 days.	From 15 days and less than 1 month.	From 1 month and less than 2 months.	From 2 months and less than 6 months.	From 6 months and less than 1 year.	From 1 year and less than 2 years.	From 2 years and less than 3 years.	From 3 years and less than 5 years.	From 5 years and less than 7 years.	From 7 years and less than 10 years.	From 10 years and above.	
..	..	..	..	..	..	..	..	..	..	..	
..	10	39	16	10	..	..	..	..	..	..	
..	..	..	3	22	..	..	..	..	..	..	
..	10	39	19	22	..	..	..	..	..	..	
..	..	..	..	..	..	..	..	..	..	..	
..	..	..	..	..	..	..	..	..	..	..	
..	..	..	..	..	..	..	..	..	..	..	
..	..	..	..	..	..	..	..	..	..	..	
..	..	..	..	..	..	..	..	..	..	..	

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

# APPENDIX

## STATEMENT

*Comparative Statement of Expenditure for the Maintenance of the Prisoners  
showing the amount under each head of Charge,*

		KURRACHEE.	
		Prisoners in 1863-4, -927. Prisoners in 1864-5, -404.	
		1863-64.	1864-65.
		Rs. a. p.	Rs. a. p.
Prisoners' allowance .....		39,782 3 6	19,334 11 11
Prisoners' money allowance .....		537 4 0	313 2 0
	Total....	40,259 7 6	19,647 13 11
	Cost per prisoner .....	43 6 10	48 10 3
Fixed Establishment including Guards .....		18,909 3 3	12,044 10 10
	Cost per prisoner .....	20 6 4	29 13 0
Extra Establishment .....		1,067 7 11	1,907 1 4
	Cost per prisoner .....	1 2 5	1 11 6
	Total....	19,976 11 2	13,951 12 2
	Cost per prisoner .....	21 8 9	34 8 6
Hospital Charges.	European Medicines .....	.....	.....
	Cost per prisoner .....	.....	.....
	Bazaar Medicines .....	.....	.....
	Cost per prisoner .....	.....	.....
	Sick diet .....	2,088 13 0	663 14 8
	Cost per prisoner .....	2 4 1	1 10 3
	Furniture and bedding and extra blankets. ....	462 0 0	.....
	Cost per prisoner .....	0 8 0	.....
	Total.....	2,550 13 0	663 14 8
	Cost per prisoner .....	2 12 1	1 10 3
Clothing including blankets and bedding .....		5,991 7 0	2,331 2 6
	Cost per prisoner .....	6 7 5	5 12 4
Contingencies .....		3,706 5 0	2,121 6 6
	Cost per prisoner.....	4 0 0	5 4 0
Additions, alterations, and repairs .....		1,055 0 0	214 12 0
	Cost per prisoner .....	1 2 2	0 8 6
Gross cost of maintenance .....		35,539 11 8	38,930 13 9
	Gross cost per prisoner .....	79 5 3	96 5 10
Deduct value of labour .....		24,277 11 1	359 8 5
Net total cost of maintenance .....		49,282 0 7	38,571 5 4
Net total cost per prisoner .....		53 2 3	95 7 7

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

N<sup>o</sup>. XV.

## No. 13.

*in the Jails in the Province of Sind for the official years 1863-64 and the number of Prisoners, and the cost per head.*

HYDRABAD.			SHIKARPOOR.			SUMMARY.		
Prisoners in 1863-64—478. Prisoners in 1864-65—400.			Prisoners in 1863-64—471. Prisoners in 1864-65—506.			Prisoners in 1863-64 Prisoners in 1864-65—		
1863-64.	1864-65.		1863-64.	1864-65.		1863-64.	1864-65.	
Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs.	
16,215 11 2	18,227 3 4		9,687 13 2	17,651 14 7		65,626 11 10	55,213	
1,188 15 11	.....		98 10 0	.....		1,824 13 11	313	
17,404 11 1	18,227 3 4		9,786 7 2	17,651 14 7		67,459 9 9	55,526 18	
36 6 7	36 8 6		20 12 6	29 9 11		35 15 4	37 0	
14,323 4 9	11,535 5 3		10,528 1 7	10,685 0 0		43,760 9 7	34,265 0	
29 15 5	23 1 10		22 5 8	17 14 10		23 5 3	22 13 3	
777 15 5	1,447 1 11		1,080 0 0	1,075 7 9		2,925 7 4	4,429 11 0	
1 10 1	2 14 5		2 4 8	1 12 10		1 8 11	2 15 3	
15,101 4 2	12,982 7 2		11,608 1 7	11,760 7 9		46,686 0 11	38,694 11 1	
31 9 6	26 0 3		24 10 4	19 11 8		24 14 2	25 13 0	
103 11 9	87 3 4		.....	.....		103 11 9	87 3 4	
0 3 6	0 2 9		.....	.....		0 0 11	0 0 11	
264 0 6	50 0 3		262 10 8	286 5 2		526 11 2	336 5 5	
0 8 10	0 1 7		0 8 11	0 7 8		0 4 6	0 3 7	
0 4 2	11 13 4		66 14 1	51 15 6		2,155 15 3	727 11 6	
.....	0 0 4		0 2 4	0 1 5		1 2 5	0 7 9	
.....	.....		225 6 0	177 13 0		687 6 0	177 13 0	
.....	.....		0 7 8	0 4 9		0 5 10	0 1 11	
368 0 5	149 0 11		554 14 9	516 1 8		3,473 12 2	1,329 1 3	
0 12 4	0 4 8		1 2 11	0 13 10		1 13 8	0 14 2	
3,232 1 6	3,032 7 9		1,577 4 4	1,769 15 0		10,800 12 10	7,133 9 3	
6 12 2	6 1 3		3 5 7	2 15 6		5 12 1	4 12 2	
2,560 2 10	1,036 8 8		1,037 8 9	1,434 15 9		7,304 0 7	4,592 14 11	
5 5 8	2 1 3		2 3 3	2 6 6		8 14 3	3 1 0	
242 4 5	667 15 1		2,672 4 0	1,771 3 6		3,969 8 5	2,653 14 7	
0 8 1	1 5 5		5 10 7	2 15 7		2 1 10	1 12 5	
38,908 8 5	36,095 10 11		27,236 8 7	34,904 10 3		1,39,684 12 8	1,09,931 2 11	
81 6 4	72 5 4		57 13 2	68 9 0		74 7 4	73 5 5	
6,995 7 3	8,448 9 0		4,117 15 3	7,506 1 7		35,391 1 7	16,314 3 0	
31,913 1 2	27,647 1 11		23,118 9 4	27,398 8 8		1,04,293 11 1	98,616 15 11	
66 12 2	55 6 6		49 1 4	45 15 6		55 9 6	62 7 3	

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

# APPENDIX

## STATEMENT

*Showing the Outturn of Manufactures in the*

	1	2	3	4	5	6	7
	Average daily Number of Prisoners employed in manufactures.	Value of articles sold in the bazaar.	Value of articles consumed for public purposes.	Total Receipts.	Value of articles remaining in store at the close of the year.	Grand Total	Deduct value of articles in store at the close of past year.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Kurrachee ..	186	3,496 0 11	....	3,496 0 11	2,416 13 3	5,912 14 2	2,498 1 5
Hydrabad ..	82	4,961 8 11	....	4,961 8 11	2,486 8 5	7,451 1 4	2,648 10 1
Shikarpoor ..	94	5,414 4 0	4,284 10 0	9,698 14 0	1,834 4 0	11,533 2 0	2,268 3 10
Total ..	362	13,874 13 10	4,284 10 0	18,159 7 10	6,737 9 8	24,897 1 6	7,414 15 4

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

N<sup>o</sup>. XVI.

## No. 14.

*Jails in Sind during the year 1864-65.*

8	9	10	11	12	13	14
Gross receipts of the year.	Charges incurred during the year.	Profits.	Average earning per Prisoner.	Loss.	Profit on manufactures during the year 1863-64.	Average earning per Prisoner.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
3,414 12 9	3,237 3 6	177 9 3	0 15 3 3	....	3,219 3 3	17 6 5
4,802 7 3	3,842 10 5	959 12 10	11 11 3 3	....	3,820 7 5	40 10 3
9,264 14 2	4,804 12 2	4,460 2 0	47 7 2	....	3,619 7 1	37 5 0
17,482 2 2	11,884 10 1	5,597 8 1	15 7 8	....	10,659 1 9	28 5 7

C. G. WIEHE, M.D.,  
Inspector General of Prisons.



## APPENDIX

## STATEMENT

*Showing the Abstract of the Prisoners' Employment and their*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Daily average number of Prisoners.													Net Profit	
	Total sentenced to labour.	Employed in manufactures.	Hired by the Department of Public Works.	Hired by other Departments.	Employed on the roads.	Employed as Convict Guards.	Employed as Khallabardur.	Employed as Jail servants.	Employed on light labour.	On miscellaneous works.	Sick in Hospital.	Inefficient from age.	On account of Sundays and holidays.	In Column 2.	
														Total.	Annual average of each Prisoner.
														Rs. a. p.	Rs. a. p.
Kurrachee.....	382	186	..	..	..	..	..	121	6	20	23	9	17	177 9 3	0 15 3 3
Hydrabad ....	465	82	..	98	..	13	..	47	51	91	17	17	49	959 12 10	11 11 3 3
Shikarpoor ....	579	94	..	152	112	5	..	18	8	116	11	..	63	4,460 2 0	47 7 2
Total....	1,426	362	..	250	112	18	..	186	65	227	51	26	129	5,597 8 1	15 7 5

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

N<sup>o</sup>. XVII.

No. 15.

*Earnings in the Jails in Sind during the year 1864-65.*

16	17	18	19	20	21	22	23	
on account of Prisoners.						Fines.		
In Column 3.		In Columns 4 and 5.						
Total.	Annual average of each Prisoner.	Total.	Annual average of each Prisoner.	Total receipts as per Columns 14, 16, and 18.	Annual average of each Prisoner sentenced to labour.	Imposed.	Realized.	Total of Columns 20 and 23.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
....	....	.....	....	177 9 3	0 7 5	....	....	177 9 3
....	....	21 3 9	0 3 6	981 0 7	2 1 9	....	....	981 0 7
....	....	5,661 5 7	21 7 1	10,121 7 7	17 7 8	....	....	10,121 7 7
....	....	5,682 9 4	15 11 2	11,280 1 5	7 14 7	....	....	11,280 1 5

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

## APPENDIX

## STATEMENT

*Showing the daily Average Number of Prisoners employed in each*

JAILS.	Brick making.	Pounding sorkey.	Manufacturing lime.	Pottery.	Manufacturing saltpetre.	Splitting wood for fuel.	Manufacturing charcoal and gools.	Husking rice and grinding atta and dhall.	Manufacturing oil.	Carpentry.	Iron work.	Saddlery.	Shoemaking.	Tailoring.	Manufacturing gunny.	Manufacturing blankets.	Manufacturing cloth.	Manufacturing table covers, towels, and dusters.	Manufacturing tape.	Spinning thread.	Manufacturing carpets, durrees, &c.
Kurrachee .....	5							2	6	5	5	10	8	14	5	1	38				
Hydrabad .....	6	5	3					8	3	2	1	5	3	6	1	2	9	4			
Shikarpoor .....	2		5					12	3		3	3	2	6	10	2	3	6	6		
Total....	8	5	13					40	12	7	9	18	2	17	29	8	6	53	10		

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

N<sup>o</sup>. XVIII.

No. 16.

*branch of Manufacture in the Jails in Sind during the year 1864-65.*

Manufacturing string and twine.	Manufacturing paper.	Manufacturing bamboo, rattan, and reed articles.	Breaking stone.	Manufacturing ink.	Gardening.	Making bread.	Building.	Making tiles, khupre's, &c.	Preparing kunker.	Cutting stone.	Miscellaneous manufactures.	Total.	RBM ARKS.
..	..	4	9	..	3	10	..	2	..	..	41	186	
..	..	1	4	..	12	8	..	..	..	..	..	82	
4	6	5	..	..	8	8	..	..	..	..	..	94	
4	6	10	13	..	23	26	..	2	..	..	41	362	

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

# APPENDIX N<sup>O</sup>. A.I.A.

## STATEMENT No. 17.

*Showing the result of Prisoners' Labour in each of the Jails in Sind during the year 1864-65.*

NAMES OF JAILS.	Average number of Prisoners sentenced to labour.	Average number of Prisoners employed on manufactures.	Amount of output of manufactures.	Average earning during 1864-65 of Prisoners employed on manufactures.	Average earning during 1864-65 from manufactures of each Prisoner sentenced to labour.	Average earning during 1863-64 of each Prisoner sentenced to labour.
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Kurrachee .....	382	186	177 9 3	0 15 3.3	0 7 5	3 9 10
Hydrabad .....	465	82	959 12 10	11 11 3.3	2 1 9	7 12 6
Shikarpoor .....	579	94	4,460 2 0	47 7 2	7 11 3	8 1 7
Total .....	1,426	362	5,597 8 1	15 7 5	3 14 10	5 12 8

*Inspector General of Prisons' Office,  
Pocha, 20th February 1866.*

*\* C. G. WIEHE, M.D.,  
Inspector General of Prisons.*

## APPENDIX No. XX.

## STATEMENT No. 18.

*Showing the Names and periods of Service of the Officers and Medical who were in charge of the Jails in Sind during the period embraced Report, viz. from 1st May 1864 to 30th April 1865.*

JAILS.	Names of Officers with periods of Service from 1st May 1864 to 30th April 1865.	Names of Medical with periods of Service from the 1st May 1864 to 30th April 1865.
Kurrachee . . .	<p>T. Weeding, Esq., Acting Session Judge, from 1st May to 27th August 1864.</p> <p>F. Gibbons, Esq., Deputy Magistrate, from 28th August to 27th September 1864.</p> <p>A. H. Plunkett, Esq., Deputy Magistrate, from 28th September 1864 to 30th April 1865.</p>	<p>John Bean, Civil Surgeon, from 1st May 1864 to 30th April 1865.</p>
Hydrabad . . .	<p>Major W. Widdicombe, Session Judge, from 1st May to 9th November 1864.</p> <p>W. T. Cole, Esq., Acting Hoozoor Deputy Magistrate, from 10th November to 28th December 1864.</p> <p>Doctor Hopkins, Civil Surgeon, from 29th December 1864 to 14th March 1865.</p> <p>B. Bradford, Esq., Hoozoor Deputy Magistrate, from 15th March to 30th April 1865.</p>	<p>Assistant Surgeon A. N. E. Riddle, from 1st May to 15th September 1864.</p> <p>Assistant Surgeon N. Hopkins, from 16th September 1864 to 30th April 1865.</p>
Shikarpoor . . .	<p>Lieut. G. C. Grant, Session Judge, from 1st May to 10th December 1864.</p> <p>W. A. Ingle, Esq., Hoozoor Deputy Magistrate, from 11th December 1864 to 6th January 1865.</p> <p>Doctor J. Ffolliott, Officiating Deputy Collector, from 12th January to 30th April 1865.</p>	<p>Dr. J. Ffolliott, from 1st May 1864 to 30th April 1865.</p>

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

C. G. WIEHE, M.D.,  
Inspector General of Prisons

## APPENDIX

## STATEMENT

*Abstract Statement of the Out-turn of Manufactures*

1	2	3	4	5	6	7	8
YEARS.	Number of manufacturing Jails.	Average number of Prisoners sentenced to labour in all Jails.	Average number of Prisoners employed upon manufactures.	Value of articles sold and consumed for public purposes.	Add value of articles in store at the close of the year.	Total.	Deduct value of articles in store at the close of the preceding year.
				Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1859 .....	2	711	55	28,554 10 11	7,508 7 10	36,063 2 9	3,111 8 1
1860 .....	3	1,310	398	45,199 12 2	10,938 7 11	56,138 4 1	7,011 6 4
1861 .....	3	1,485	480	43,241 6 9	13,055 10 1	56,297 0 10	11,079 11 11
1862 .....	3	1,431	291	21,335 9 7	7,973 14 9	29,309 8 4	11,624 3 7
1863-64.....	3	1,697	346	23,860 2 9	7,060 14 5	30,921 1 2	7,225 11 8
1864-65.....	3	1,426	362	18,159 7 10	6,737 9 8	24,897 1 6	7,414 15 4

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

No. XXI.

No. 19.

*in the Jails in Sind from 1859 to 1864-65.*

9	10	11	12	13	14	15	16
Gross outturn of the year.	Charges incurred during the year on account of manufactures.	Net produce of the year	Average earning of each Prisoner employed upon manufactures.	Average earning from manufactures of each Prisoner sentenced to labour.	Increase in the produce of the year as compared with the preceding year	Decrease in the produce of the year as compared with the preceding year	
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
32,951 10 8	28,794 8 1	4,157 2 7	75 9 4	5 13 7	.....	.....	
49,126 13 9	25,318 7 10	23,808 5 11	59 13 1	18 2 9	10,651 3 4	.....	
45,217 4 11	31,954 2 1	13,263 2 10	27 10 1	8 14 11	.....	10,545 3 1	
17,685 4 9	12,908 15 4	4,776 5 5	16 6 7	3 5 5	.....	8,486 13 5	
23,695 5 6	13,036 3 9	10,659 1 9	30 12 11	6 4 6	5,882 12 4	.....	
17,482 2 2	11,884 10 2	5,597 8 1	15 7 5	3 11 10	.....	5,061 9 8	

C. G. WIEHE, M.D.,  
Inspector General of Prisons.



## APPENDIX

## STATEMENT

*Statement showing the Profits realized from Jail*

1	2	3	4	5	6	7
YEARS.	Number of manufacturing Jails.	Average number of Prisoners sentenced to labour in all Jails.	Average number of Prisoners employed on manufactures.	Charges.	Gross receipts or value of articles sold and of those consumed for public purposes.	Value of articles in store at the end of the year.
				Rs. a. p.	Rs. a. p.	Rs. a. p.
1859 .....	2	711	55	28,794 8 1	28,554 10 11	7,508 7 10
1860 .....	3	1,310	398	25,318 7 10	45,199 12 2	10,938 7 11
1861 .....	3	1,485	480	31,954 2 1	43,241 6 9	13,055 10 1
1862 .....	3	1,431	291	12,908 15 4	21,335 9 7	7,973 14 9
1863-64 .....	3	1,697	346	13,036 3 9	23,860 2 9	7,060 14 5
1864-65 .....	3	1,426	362	11,834 10 1	18,159 7 10	6,737 9 8

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

## No. XXII.

No. 20.

*Manufactures in Sind from 1859 to 1864-65.*

8	9	10	11	12	13	14
Total out-turn or amount of Columns 6 and 7.	Net profits, being the excess of the amount in Column 6 over that in Column 5.	Average earnings of each Prisoner employed on manufactures.	Average earnings of each Prisoner sent to labour, from manufactures.	Increase in the profits of the year over those of the preceding year.	Decrease in the profits of the year from those of the preceding year.	REM
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
36,063 2 9	.....	....	..	....	....	
56,138 4 1	19,881 4 4	19 15 3	15 2 10	19,881 4 4	....	
56,297 0 10	11,287 4 8	23 8 3	7 9 7	....	8,593 15 8	
29,309 8 4	8,426 10 3	28 15 4	5 14 3	....	2,860 10 5	
30,921 1 2	10,828 15 0	31 4 6	6 6 1	2,397 4 9	....	
24,897 1 6	6,274 13 9	17 5 4	4 6 5	....	4,549 1 3	

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

## APPENDIX

## STATEMENT

*Statement showing the Expense incurred on account of the Prisoners  
Net Cost during the*

YEARS.	Total average number of Prisoners per day.	Total expense of Food per annum.	Total expense of Clothing per annum.
		Rs. a. p.	Rs. a. p.
1859 (being for Hyderabad and Shikarpoor only) the data for the Kurrachee Jail not being forthcoming .....	754	20,382 10 8	4,600 1 8
1860 .....	1,366	45,259 5 1	6,296 7 4
1861 .....	1,567	59,134 13 8	5,860 15 5
1862 .....	1,466	48,650 5 8	7,067 3 1
1863-64 .....	1,876	67,450 9 9	10,800 12 10
1864-65 .....	1,499	55,526 15 10	7,133 9 3

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

## No. XXIII.

## No. 21.

*in the Jails in Sind under every head, as well as the total Gross and years 1859 to 1864-65.*

Total expense of Establishment and Guards per annum.	Total expense of Hospital charges per annum.	Total of all other expenses and contin- gencies per annum.	Gross cost per annum	Net cost pa.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
20,189 0 0	1,506 11 9	9,137 8 0	56,116 0 1	54,483 7 11
33,111 13 9	2,470 1 4	3,827 4 2	90,961 15 8	73,253 1 5
31,149 15 0	2,785 15 0	6,867 11 2	1,06,799 6 3	85,942 2 7
37,912 6 9	1,987 2 6	5,983 6 7	1,01,600 8 7	76,953 9 9
46,686 0 11	3,473 12 2	11,273 9 0	1,39,684 12 8	1,04,293 11 1
38,694 11 1	1,329 1 3	7,246 13 6	1,09,931 2 11	93,616 15 11

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

# APPENDIX

## STATEMENT

*Statement showing the Average Expense incurred on account of each  
Gross and Net Cost during*

YEARS.	Total average number of Prisoners per day.	Total average ex- pense of each Pri- soner's Food per annum.	Total average expense of each Prisoner's Clothing per annum.
		Rs. a. p.	Rs. a. p.
1859 .....	751	27 0 6	6 1 7
1860 .....	1,366	33 2 1	4 9 9
1861 .....	1,567	37 11 10	4 6 1
1862 .....	1,466	33 3 0	4 13 1
1863-64.....	1,876	35 15 4	5 12 1
1864-65.....	1,499	37 0 8	4 12 2

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

## No. XXIV.

## No. 22.

*Prisoner in the Jails in Sind under every head, as well as the total the years 1859 to 1864-65.*

Total average expense of Establishment and Guards on account of each Prisoner per annum.	Total average of all other Hospital charges on account of each Prisoner per annum.	Total average of all expenses and contingencies for each Prisoner per annum.	Gross average cost of each Prisoner per annum.	Net average of each Prisoner per annum.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
26 12 5	2 0 0	12 8 3	74 6 9	72 4 2
21 3 10	1 12 11	2 12 10	66 9 5	53 10 0
19 14 1	1 12 5	4 6 1	68 2 6	54 13 6
25 13 9	1 5 8	4 1 4	69 4 10	52 7 10
24 14 2	1 13 8	6 0 1	74 7 4	55 9 6
25 13 0	0 14 2	4 13 5	73 5 5	62 7 3

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

## APPENDIX

## STATEMENT

*Statement showing the Value of Articles manufactured for Prison use,  
Buildings in the Jails in Sind for*

	1	2	3	4
JAILS.	Wheat ground for Prisoners' use.	Clothing and bedding for Prisoners' use.	Pottery for Jail purposes.	Baskets for Jail use.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Kurrachee .. . . . .	.....	388 14 0	98 8 0	.. .
Hydrabad .. . . . .	696 8 0	3,032 7 9	237 4 3	....
Slukarpoor .. . . . .	942 1 6	1,145 8 0	210 0 0	..
Total ..	1,638 9 6	4,566 13 9	575 12 3	....

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

## No. XXV.

No. 23.

*and the Product of Convict Labour employed on Jails or Public  
the year 1864-65.—Indirect Profits.*

5	6	7	8	REMARKS.
Constructing Jail or other public buildings.	Vegetables grown in Jail garden.	Miscellaneous.	Total Indirect Profits.	
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
....	...	....	187 6 0	
1,843 3 8	291 14 1	43 8 9	6,141 11 6	
....	....	2,731 8 6	5,059 2 0	
1,843 3 8	291 14 1	2,775 1 3	11,691 6 6	

C. G. WIEHE, M.D.,  
Inspector General of Prisons.



## APPENDIX

## STATEMENT

*Detailed Statement showing the estimated Saving to Government by the  
all menial duties in the Jails*

No.	1			2			3			4			5			6			7		
	Barbers.			Blacksmiths.			Carpenters.			Cooks.			Employed in the Godown.			Hospital Attendants.			Moohees or Shoemakers.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Kurrachee ..	58	3	3	250	12	2	320	13	2	531	1	11	812	13	5	214	11	5	81	12	4
Hydrabad ..	49	0	0	144	0	0	216	0	0	384	0	0	....			144	0	0	48	0	0
Shikarpoor ..	48	0	0	216	0	0	144	0	0	960	0	0	48	0	0	192	0	0	96	0	0
Total....	154	3	3	610	12	2	680	13	2	1,925	1	11	890	13	5	550	11	5	225	12	4

*Inspector General of Prisons' Office,  
Poona, 20th February 1866.*

## No. XXVI.

No. 24.

*substitution of Prison Labour for a paid Establishment in performing in Sind during the year 1864-65.*

8	9	10	11	12	13	14	
Sweepers.	Tailors.	Washermen.	Water Carriers.	Weighmen.	Writers.	Total.	Res.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
1,460 8 5	257 1 6	208 11 7	567 7 2	....	463 2 0	5,307 2 4	
432 0 0	360 0 0	144 0 0	288 0 0	....	288 0 0	2,496 0 0	
1,344 0 0	384 0 0	288 0 0	288 0 0	18 0 0	432 0 0	4,488 0 0	
3,236 8 5	1,001 1 6	640 11 7	1,143 7 2	248 0 0	1,183 2 0	12,291 2 4	

C. G. WIEHE, M.D.,  
Inspector General of Prisons.

## APPENDIX No. A.A.

## STATEMENT No. 25.

*Statement showing the Number of Admissions and Disposal of Prisoners in the Lock-ups in the Province of Sind during the year 1864-65.*

LOCK-UPS.											EXPENSE
	Number of Prisoners remaining in Lock-ups on the 30th April 1864.	Number admitted into the Lock-ups during the year 1864-65.	Total Number in the Lock-ups and 2.	Transferred to Sudder Courts for trial to higher Courts.	Acquitted.	Released.	Escaped.	Died.	Total of Columns 4 to 9.	Number remaining in Lock-ups on the 30th April 1865.	Cost of Establishment.
1	2	3	4	5	6	7	8	9	10	11	12
Kurrachee { Sudder Station Courts	132	3,082	3,214	794	1,193	1,138	..	1	3,126	88	84 0 0
District Courts	..	..	..	..	..	..	..	..	..	..	..
Hydrabad { Sudder Station Courts	14	827	841	580	157	37	..	..	804	37	..
District Courts	84	3,294	3,378	1,185	1,172	875	..	1	3,233	145	..
Shikarpoor { Sudder Station Courts	28	1,564	1,592	976	351	165	..	..	1,492	100	..
District Courts	106	3,744	3,850	1,621	1,251	796	..	4	3,672	178	..
Frontier districts { Sudder Station Courts	..	383	383	57	163	101	..	..	351	32	..
Upper Sind { District Courts	..	..	..	..	..	..	..	..	..	..	..
Total.....	364	12,894	13,258	5,243	4,317	3,112	..	6	12,678	530	84 0 0

LOCK-UP.	EXPENDITURE.									
	Cost of Guards.	Cost of Fuel.	Cost of Clothing.	Transfer Charges.	Repairs to Lock-ups.	Miscellaneous Charges.	TOTAL			
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	13	14	15	16	17	18				10
Kurrachee .... { Sudder Station Courts .. }	5,881 1 5	5,165 1 3	240 1 11	1,907 3 3	526 15 9	1,781 1 3	14,982 8 10			
Hydrabad .... { Sudder Station Courts .. }	9,603 12 9	6,762 8 3	106 14 1	518 2 5	772 15 4	1,493 2 3	19,167 7 1			
Shikarpoor .... { Sudder Station Courts .. }	5,015 9 8	6,385 5 3	335 5 3	272 2 9	546 7 0	649 7 10	13,204 59			
Frontier districts { Sudder Station Courts .. }	1,738 0 0	522 13 5	8 4 0	20 6 4	....	99 15 2	2,389 6 11			
Upper Sind .. { District Courts .. }										
Total.....	22,138 7 10	18,835 12 2	690 9 5	2,717 14 9	1,816 6 1	3,420 10 6	49,733 12 7			

C. G. WIEHE, M.D.,  
Inspector General of Prisons

Inspector General of Prisons' Office,  
Poona, 20th February 1866.



No. 182 of 1867.

JUDICIAL DEPARTMENT,

*Bombay Castle, 18th January 1867.*

Letter from the Inspector General of Prisons, dated February 1866, forwards the Annual Report on the in Sind for the official year 1864-65.

RESOLUTION.—The gross expenditure on the jails of Sind in the year under report was Rs. 1,09,931. The daily average number of prisoners was 1,499, and the cost per prisoner was therefore Rs. 73-5-5 per annum, or about Rs. 6-1-9 per mensem.

2. In the year 1863-64 each prisoner had cost per annum Rs. 74-7-4, and the annual cost of each has therefore fallen Rs. 1-1-11. This saving has not been effected upon “food” and “establishment,” these items being higher than in the previous year.

3. There is a decrease in the gross cost of maintenance of Rs. 29,753. This result is to some extent owing to the falling off in the number of prisoners, in itself a subject of congratulation.

4. The value of the prisoners’ labour in 1863-64 was Rs. 38,543, from which it has fallen in the year under report to Rs. 11,280, giving less than Rs. 7½ as the earning of each prisoner, that being less than one-third of the amount earned by each prisoner in the previous year.

5. The reasons given by the Inspector General of Prisons for such unsatisfactory results, are the breaking up of two special gangs, and the stoppage of the factory at Kurrachee (where the earnings have been next to nothing) by the outbreak of a severe epidemic at the close of the previous year.

6. The above causes would seriously affect the earnings at Kurrachee and the total earnings, but it is disappointing to find that

... e no such causes were at work, each prisoner  
 ... an in the year 1863, when His Excellency in Council  
 ... e report of the Hyderabad jail unsatisfactory in this respect.

... Reform is called for in the Kurrachee jail, where the expenses  
 ... very heavy, whether they are compared with the previous year's  
 ... ses, or with those of the other jails for the present year. The  
 ... f maintenance is exceptionally high.

... In paragraph 130 the Inspector General gives Rs. 16,314  
 ... income of the jails from all sources ; but it nowhere appears  
 ... e this amount is derived, it being much in excess of the value  
 ... e prisoners' labour.

9. 72 prisoners died during the year, giving a ratio of deaths  
 ... average strength of 4·8 per cent., which is considerably below the  
 ... verage for the last 10 years in the whole Presidency, excepting  
 Sind.

10. It is no less satisfactory to note that cholera has made no  
 victims, and dysentery, diarrhoea, and fever very few in comparison  
 ... with the previous year

11. It appears that the jail at Hyderabad had, during the period  
 under report, become not only more costly, but far more un-  
 healthy than it was in 1863. The marked unhealthiness of this jail  
 is attributed by the Civil Surgeon to defective ventilation and over-  
 crowding. The Inspector General could not at the date of this  
 report offer an opinion, founded on personal knowledge, as to the  
 possibility of improving the ventilation of the present jail, since his  
 tours of inspection in Sind had not then extended further than  
 Kurrachee.

12. There were 100 re-convictions. While admitting the truth  
 of the Inspector General's remark, that it is difficult to reclaim professed  
 thieves, His Excellency in Council notices also, that 97·25 per cent. of  
 the criminal population of the province are totally uneducated. The  
 attempt which has been made at Hyderabad and Kurrachee to educate  
 juvenile prisoners having met with success, might apparently with  
 advantage be extended to the Shikarpoor jail.

13. At a time when the Sind jails are so crowded, and a central jail has been decided upon, it does not seem an **Excellency in Council** to increase the jail establishment at Shikarpore as proposed by Dr. Wiehe at page 59 of the report.

14. In paragraphs 81 and 82 Dr. Wiehe remarks, "Of the escaped convicts during the last two years, 6 only were re-captured and 20 remained at large. This is a large proportion, and the subject demands the attention of the Police authorities." The Superintendent of Police should endeavour to trace the prisoners who remain at large.

15. The Inspector General, in his Report dated 27th March 1863, represented that the floors of the Shikarpore jail should be re-made, the stones removed, and a smooth mud floor substituted and in consequence it was ordered in the Government Resolution that the floors should be re-made. The Inspector General should state by whose orders, and for what reason, the tiles complained of by the Civil Surgeon were put down, instead of the mud floor recommended by him.

16. The Governor in Council will not, in connection with this report, further remark upon the nature of the statistical tables which it embodies, as that subject has been discussed in a recent Resolution No. 3572 of the 13th November last.

W. WEDDERBURN,

Acting Secretary to Government.

To

THE COMMISSIONER IN SIND.

THE INSPECTOR GENERAL OF PRISONS.





**SELECTIONS FROM THE RECORDS OF  
GOVERNMENT.**

**NO XCIX.—NEW SERIES**

**PRÉCIS**

OF THE

**CORRESPONDENCE ON THE SUBJECT OF LIGHTING UP  
THE ENTRANCE**

TO THE

**HARBOUR OF BOMBAY.**

**Bombay:**

**PRINTED FOR GOVERNMENT**

**AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.**

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**1866.**



# P R E C I S

OF THE

## CORRESPONDENCE ON THE SUBJECT OF LIGHTING THE ENTRANCE TO THE HARBOUR OF BOMBAY

1. The subject was laid before Government for consideration in a Report\* (which is published in *tenso* in the next paragraph) from Captain W. C. Barker, Conservator of the Port, in which, after reviewing the existing means for the purpose, he proposed the following as what should be done with respect to the lighting up the entrance to the Harbour :—

1st.—A new Lighthouse, painted white, on the extreme edge of the S. W. Prong. It should have a first class *Revolving* light, 150 feet above high-water mark.

2nd.—A loftier Flagstaff at Malabar Point.

3rd.—A new Lighthouse, painted white and red, in horizontal lines, at Kennerly. It should have a first class *Fixed* light, 180 feet above high-water mark.

4th.—A martello tower on the “Sunken Rock,” displaying from its summit a *Fixed* light of the 2nd or 3rd class.

5th.—The inner and outer Light Ships to be then removed.

2. Captain Barker’s Report alluded to above is as follows :—

“ I have the honour of submitting the following Report on the Lighthouses, Light Vessels, Beacons, and Beacon Buoys of this Harbour.

“ 2. I would premise that I am aware that of late years many and various schemes for the improvement of the Port of Bombay, both with regard to the efficient Lighting and Pilotage as also the Harbour Defences, have been submitted to Government for consideration, but little has yet been done towards carrying into practical effect what every one acknowledges to be so highly necessary.

at the same time aware that, in the present state of finances, it is hardly to be expected that Government will be induced to undertake what is recommended in the following immediately; still I feel it my duty to lay before them what I consider so essentially necessary for the shipping interests of this Commercial Port, and for the benefit of Government.

It is apparent to every one that the Port of Bombay is coming of more importance both politically and commercially as it does all the essential requirements for the maintenance of an efficient Naval Arsenal, and all the qualifications of a great commercial Port, capable of being rendered easy of access, open at all times, whether by night or day, and at all the seasons of the year; but at the same time, if not inaccessible, at least very formidable, to enemies. It is in fact the very key to our Indian Empire on the West Coast, and the Grand Depot for Military Stores, and it is indeed surprising that its great capabilities have not long ere this been more fully developed.

"5. I propose in the first place noticing the boundaries of the entrance to the Harbour—the Lighthouses, Light Vessels, Beacons, and Beacon Buoys as they exist at present; secondly, to suggest what I consider necessary towards the efficient lighting up of the entrance to the Harbour; and, thirdly, to point out what may be done towards protecting the entrance to the same, and of our mercantile fleet.

"6. Kennery or Kundaree Island marks the boundary of the entrance to the Harbour on the south side. It is a small rocky Island, bearing from the Lighthouse south distance  $11\frac{3}{4}$  miles, and is elevated near 100 feet above the level of the sea. •

"This is the point all vessels should endeavour to make (especially during the South-West monsoon) in running for the Harbour.

"7. To the North the entrance to the Harbour is known by Malabar Hill, with its low insignificant Flagstaff half way down the brow of the hill, and by the Lighthouse. This latter is situated at the extreme south end of Colaba, and is elevated about 130 feet above low-water mark.

"The Light displayed is a Revolving Light visible from the deck of a ship, in ordinarily clear nights, about 16 or 18 miles. It is not

easily discernible during the day on account of the  
and buildings.

“The South-West Prong extends to the South-West Lighthouse, a distance of  $2\frac{1}{4}$  miles, drying at low-water tides to a distance of  $1\frac{3}{4}$  miles.

“8. The Fair-Way to the entrance of the Harbour is by a floating Light Vessel, moored equi-distant about 2 miles from the extremity of the South-West Prong, and the foul ground Thull, is seven fathoms at low-water spring-tides. The following are the bearings and distances of the principal points from the Light Vessel :—

Malabar Point Flagstaff N. 4 deg. 50 E. distance 6.90 miles.

Lighthouse, N. 21 deg. to 50 min. E. 4.53 miles.

South-West Prong extremity North, 2 miles.

Inner Light Vessel, N. 38 deg. 50 min. E. 4.68 miles.

Middle of Thull Shoal, E.S.E. about 2 miles.

Kennery or Kundaree Island, S. 14 deg. E. nearly  $7\frac{1}{2}$  miles.

“9. This vessel (built especially for the purpose) took up her station early in 1842, displays a bright Light at her mast-head from sunset to sunrise, is visible 10 to 12 miles from a ship's deck in clear weather; a Blue Light is burnt every hour during the night, and a torch at the half hours. During the day a red ball is shown from the mast-head, and on a sail being signalled a red flag is hoisted.

“10. Notwithstanding that this vessel is moored with very heavy cables and anchors, she has broken adrift several times (twice during last South-West monsoon). Of course this is more likely to happen in very bad weather, when such a guide to the entrance of the Harbour (more particularly with the Lighthouse in its present position) is most urgently required.

“11. About  $\frac{3}{4}$  of a mile North-East by North of the outer Light Ship is a large wooden Buoy, which has a spiral top, painted red, called the Fair-Way Buoy; this has also broken adrift several times, and of course is more likely to do so in very bad weather.

“12. The Inner Light Vessel (an old dismantled Schooner of about 90 tons) is moored to Southward of Sunken Rock, and bears from Outer Light Vessel N. E.  $\frac{1}{2}$  North  $4\frac{1}{2}$  miles. This vessel has

mast-head, displays a bright light from sunset to dawn a red flag at her mast-head during the day on a ship signalled at the Lighthouse. About  $\frac{1}{4}$  of a mile to N.N.W. Buoy, marking the exact position of the Sunken Rock. Concluding remarks of the last two paragraphs are also applicable to the Inner Light Vessel and Buoy. The Inner Light Vessel drift once last South-West monsoon.

13. Beside the above there is a Beacon (a white stone pillar 4 feet high) on the 'Oyster Rock,' a small Lighthouse on 'Dolphin Rock' displaying a green Light to the Southward Eastward, and Bright Light to the Northward, dark to the Westward. This latter was erected at the close of the year 1856, it strange to say accommodation for the men necessary to keep the lamps trimmed was entirely lost sight of in the construction of this building; this is now being remedied.

"14. The middle ground Shoal is defined by a chequered white and black Buoy to the Southward and a black Buoy to the Northward; both are of Iron.

"15. The Flagstaff Shoal by a large red Buoy.

"16. The Northern patches between the last named Shoal and Cross Island are marked by small Iron Buoys.

"17. There are also small Iron Buoys, marking the Northern and South-East edges of the Reef off Butcher's Island, and a Buoy marking the position of a small patch of rocks on North-Eastern verge of reef of Caranja Island.

"18. Having thus described the principle points marking the limits of the entrance to the Harbour, as also the Lighthouses, Light Vessels, Beacons and Beacon Buoys as they at present exist, I will now proceed to show what I consider necessary should be done with regard to so important a matter as the lighting up the entrance to the Harbour.

"19. Lighthouses should be erected, if possible, on the dangers they are intended to guard against, and not (as is the case with the present Lighthouse at Colaba) two miles and three-quarters within the danger.

"20. The utility of Floating Light Vessels cannot for a moment be called in question, where the cost is low, and where

sunken rocks and hidden dangers extend a to seaward; but for this Port they are not only but often mischievous, for, as I have observed before, at the time they are most urgently required, namely, in extreme weather, they are most likely to break adrift.

“21. Before the present Floating Light Vessels can be dispensed with, it is necessary to make a radical change in the bad system of lighting up the approach to the Harbour.

“22. In the first place I would recommend that a Light be erected on the extreme edge of the South-West Prong, which dries at low-water spring-tides. It should be a first class Revo. Light, and elevated 150 feet above high-water mark, so as to be visible from the deck of a ship in clear weather 18 to 20 miles.

“23. I would also recommend that a loftier Flagstaff be erected on Malabar Point, so as to appear well above the trees and buildings in the vicinity. The approach to the Harbour on the North side would then be clearly defined.

“24. Kennery or Kundaree Island is elevated, as before stated, about 100 feet above the level of the sea on its highest point. I would recommend the erection of a Lighthouse some 80 feet above the summit, or 180 feet above the sea, to show a fixed bright light of the 1st class, so as to be visible in ordinary weather 20 to 22 miles from the deck of a ship. This Lighthouse should be painted in alternate red and white broad bands or belts horizontally. The Lighthouse at the end of South-West Prong should be all white, then there could not possibly be any chance of mistaking one for the other either by night or day.

“25. A double light on Kennery was advocated by the Committee appointed by Sir Henry Leeke to report on the subject of an improved system of Lighting Pilotage. I do not see the utility of a double light when the latter would answer every purpose.

“26. The Sunken Rock, I am aware, is very small, but it is by no means impossible to erect a martello tower thereon, which would assist materially in defending the entrance to the Harbour, and at the same time by displaying from its summit a bright fixed Light of the 2nd or 3rd class, so as to be visible 5 or 6 miles from a



and thus complete the lighting up of the entrance to our. Both Inner and Outer Light Vessels might then be added.

27. Thirdly, with regard to defending the entrance to the our, the intervening space on the South-West Prong, between proposed new Lighthouse and the Southern end of Colaba, in the course of a few years be all reclaimed from the sea, an excellent site for a series of Batteries, which would add greatly to the strength of the Harbour Defences now in of construction. For the erection of these works we have materials in close proximity, and let it not be forgotten that we have certain fine weather for at least eight months in the year, that the works may be carried on progressively and surely.

28. But whatever may be determined with regard to the Harbour Defences, years must elapse before they can be sufficiently advanced to resist the entrance of a hostile fleet. I cannot for a moment suppose that an enemy's fleet would venture to appear unless assured of the absence of men-of-war sufficient to protect the shipping; but with the present fortifications, a couple of smart Frigates, well handled, could, in my opinion, either capture or destroy the whole of the mercantile fleet with almost entire impunity to themselves as the ships are now anchored.

29. I would suggest, in the event of a hostile fleet being expected, that the shipping be moved to the Northward of Butcher's Island and Elephanta Island, and to the deep-water anchorage off the old Fort on East end of Trombay Island; by throwing up Batteries on Butcher's Island, Elephanta, Trombay, and on the Northern end of Caranja, the shipping would thus be completely protected.

30. There is smooth and deep water close to the Island of Trombay. By the construction of a few piers on piles or arches, so as not to obstruct the tidal scour, ships might haul alongside to discharge and receive cargo. This spot is only distant from the Railway about  $4\frac{1}{2}$  miles. Would not this obviate the necessity for Wet Docks, and be less costly?

31. By removing merchant vessels from their present anchorage, the guns on the eastern or Harbour face of the Fort might

then be made available for the defence of the Port, certainly could not be as the ships are now berthed.

“32. Since writing the above intelligence has been received of the total wreck of the American Ship ‘Squantum’ some 16 miles to the Southward of Kennery (exact particulars not known), which induces me to think that had there been a Light on Kennery Island, as suggested by me in the 24th paragraph calamity would probably have been averted.

“33. The erection of a Lighthouse on the extremity South-West Prong could only be carried on during the fine seasons, whereas the erection of a Lighthouse on Kennery Island could be proceeded with at all seasons. It would therefore be of more advantage to the shipping interests if the latter was first commenced.

I have the honour to be, &c.

W. C. BARKER, Captain, I. N.,  
Master Attendant and Conservator of the Port.

3. Government ordered the foregoing report to be sent to the Marine.—G. R. No. 580 of Chamber of Commerce for their opinion and suggestions.  
14th July 1862.

4. In the meantime Government received a report on the same subject from Mr. Kennelly, dated 5th August 1862, in which the following proposals were made to improve the lighting of the Harbour entrance :—

1st.—To erect a Lighthouse on wrought iron screw piles, in Latitude 18°44'48" North and Longitude 72°41'10" East, to be called the “Bombay Direction Lighthouse.” It should have a first class *Revolving* Light, flashing every 20 seconds, and elevated 100 feet above high-water mark. The Lighthouse to be painted in alternate white and black bands.

2nd.—To shift the outer floating Light Vessel  $3\frac{1}{2}$  miles nearer to the Harbour, and call it the “Fairway Light,” until it can be substituted by a Lighthouse on piles exhibiting a *Fixed* light of the 2nd class.

substitute *red* shades for the *green* shades at the Dolphin light.

h.—To abolish the Colaba Light and the Inner Light Vessel.

This report of Mr. Kennelly was also ordered by Government to be sent to the Chamber of Commerce, to be considered along with Captain Barker's report.

G. N. No. 741 of August 1862.

In reply, the Chamber of Commerce suggested that Government should appoint a Commission to inquire into, and report on the subject; and a Notification was accordingly issued appointing the officers and gentlemen not connected with Government, named below, to assemble and report "on the lighting of the Bombay Harbour, and to suggest any improvements in the Beacons or Buoys which mark the danger thereof." Captain Barker's and Mr. Kennelly's papers were also to be considered at the same time by the Committee:—

*President.*

Captain J. Young, C.B.

*Members.*

The Commissioner of Customs.

The Master Attendant.

Lieutenant-Colonel DeLisle.

Robert Hannay, Esq.

J. Farrar, Esq.

W. Johns, Esq.

J. Dixon, Esq.

To the above was afterwards added the name of—

*Member.*

Mr. ANDREW GRANT, Agent for Lloyds.

7. The Commission, on the 31st January 1863, reported as follows:—

*Bombay, 31st Jan.*

“From the COMMISSION appointed by Government Res.  
No. 907, dated 25th October 1862, to report on the Li  
of Bombay Harbour, and to suggest improvements  
Beacons and Buoys which mark the dangers there.”

“To Major W. L. MEREWETHER, C.B.,

Secretary to Government, Marine Departn

“SIR,

“We have the honour to forward the following report on  
Lighting of Bombay Harbour, and suggestions for the improvem.  
of the Beacons and Buoys which mark the dangers thereof.

“We have to recommend the following arrangements being  
carried out:—

“1st.—That the Lighthouse on Colaba,

“The Outer and Inner Light Ships, and

“The Dolphin Rock Lighthouse be continued in their present  
position.

“2nd.—That a Revolving Light of the first class be substituted  
in the Colaba Lighthouse for the Light at present exhibited, which is  
only a third class light.

“3rd.—That plate glass be fitted to the Dolphin Rock Light-  
house in place of the ordinary window glass now in use there; the  
colour to be continued the same as at present. viz. Green.

“4th.—In addition to the above, which constitute the whole of  
the Lights now exhibited, we suggest the erection on the northern  
part of the Island Kemmery of two square Lighthouses, each 80  
feet above the summit of the Island and about 180 feet above the  
Sea. Each Lighthouse to display from sunset to sunrise a bright  
fixed light of the first class. The Lighthouses to be 130 yards apart,  
and connected with a wall 20 feet high. The Lighthouses and the  
wall painted in alternate red and white bands, each band 10 feet  
wide. The Lighthouses to be north and south of each other.

subject in recommending the erection of these two displaying bright fixed lights is to prevent their being taken for either the Colaba Lighthouse, which displays a bright fixed light, or the Outer Light Ship which displays a single fixed light. The connecting walls and painted bands will form a means to enable the Mariner in the daytime to determine at once that it is the Island Kennery which he sees; with this addition to the present Lights we are of opinion that the Harbour will be well and sufficiently lighted.

“6th.—We suggest that two Buoys in addition to those now in existence be placed one on the north-west and the other on the south-west of Caranja Shoal; the Buoys to be painted black, the north-west Buoy to have the letters  $\frac{C}{N}$  (Caranja North) and the south-west Buoy the letters  $\frac{C}{S}$  (Caranja South). The letters to be white, to distinguish them from the other Buoys in the Harbour.

“7th.—With reference to Government Resolution No. 1102, dated 15th December 1862, directing us to report on the efficiency or otherwise of the Pilot Establishment for the Harbour, we suggest that a Board be appointed by Government to consist of five persons, of whom one to be the Commissioner of Customs, who should be ex-officio President of the Board. Two to be persons possessed of good practical knowledge of Marine matters; the fourth to be one of the Firm acting as Lloyds Agent in Bombay, and the fifth a gentleman to be selected by the Chamber of Commerce to represent the Mercantile Community. The Board to have full power to make and alter all regulations for the efficient discharge of all duties connected with the Pilot Establishment as well as the control of the Port Fund, provided that such regulations shall first have been submitted to, and obtained the sanction of Government, and that the Master Attendant and Conservator of the Port be the executive and responsible officer for carrying out the regulations of the said Board.

“8th.—As the question of Pilotage will form a part of the Harbour management, and will come under the consideration of the proposed Board, and as the representatives of the Chamber of Commerce express themselves perfectly satisfied, if this Board be ap-

pointed to represent their interests as large pay-  
age dues, we do not consider that much good will  
come from summoning and examining witnesses; we think  
of doing so until the sentiments of Government on the subject  
are communicated to us.

We have the honour to be, &c.

J. YOUNG, Captain, I. N., *President.*

G. INVERARITY, Commissioner of Customs.

R. HANNAY.

A. DELISLE, Lieutenant-Colonel, R.A.

W. C. BARKER, retired Captain, I. N.,

Master Attendant

A. GRANT, Agent to Lloyds.

W. JOHNS.

JOHN DIXON, Surveyor to Lloyds.

J. FARRAR.

*N.B.*—The President adds this note to record that Captain Barker, Master Attendant, signs the Report on the understanding only that a separate Minute by him, dated 28th instant, is appended, which is accordingly done with supplemental remarks thereon by the other members of the Commission.

J. YOUNG, Captain, I. N.,

President."

### *MINUTE by Captain BARKER.*

"I am of opinion that the whole proceedings of the Commission should be laid before Government.

"I submit that sufficient reasons are not shown for the rejection

In favour of Captain Barker's  
propositions—

No. 1. Red Light on Ken-  
nery Island . . . . . 38

No. 2. Lighthouse on the  
extreme end of South-  
West Prong . . . . . 50

No. 3. Retaining both  
Light Vessels in their  
present position . . . . . 35

of my propositions 1 and 2 for lighting  
up the entrance to the Harbour, sup-  
ported as the said propositions are by  
so large a majority of nautical and ex-  
perienced men, as shown in the proceed-  
ings of the second day's meeting and  
noted in the margin.

"With reference to my proposition

No. 3, 'as to whether or not the Light

Vessels should be retained in their present positions,' there can be

could be highly advantageous to the shipping in them.

would submit with due deference that the Commission have complied with the instructions of Government as contained in Notification No. 1102, Marine Department, 18th December 1862, in which as 'the inefficiency or otherwise of the existing Pilot Establishment' has not been inquired into or reported upon.

It cannot be supposed that any one would be selected for the important post of Master Attendant and Conservator of this great Commercial Port without being duly qualified and competent to perform the onerous duties laid down in Act XXII. of 1855 passed by the Legislative Council of India, and therefore if it is necessary to have a Board, the Master Attendant and Conservator of the Port should be a member thereof.

"The Port Officer at Kurrachee has been recently appointed (*vide* Government General Order, Marine Department, No. 157, dated 1st November 1862) Master Attendant of that Port and Commissioner in the Marine Department.

"The Master Attendant and Conservator of the important commercial Port of Bombay ought not surely to be placed in an inferior position.

"I am willing to submit to the opinion of the majority of the Commission, that it is not necessary to forward the detailed proceedings of each day, provided this 'Minute' be forwarded with the report.

W. C. BARKER,

Retired Captain, I. N.

*Office of the Master Attendant and Conservator of the Port,  
Bombay, 28th January 1863."*

*MINUTE of the majority of the Commission on the Lighting of Bombay Harbour on the objections stated by Captain Barker to the Report of the Commission in its present shape.*

"1. Captain Barker submits that sufficient reasons are not shown for the rejection of his propositions 1 and 2 for Lighting up

the entrance of the Harbour, and states that the Commission supported by a large majority of nautical and experienced officers. The question was fully discussed during the sittings of the Commission, and Captain Barker then readily added his own vote subject to those of the other members. His dissent at the time therefore requires explanation, as well as his change of opinion in other respects since the sittings terminated.

“2. The removal of the present Lighthouse at Colaba, rather the substitution for it of one on the Prongs, was not proposed by the Commission, Captain Barker included, for the following reasons:—

*1stly.*—It is unnecessary: the Outer Light Ship, which is commended to be retained in its present position, is quite sufficient to prevent ships running upon the Prongs.

*2ndly.*—If the Lighthouse is removed to the low-water mark of the Prongs it will still be at considerable distance from the extreme point of the danger it is intended to indicate.

*3rdly.*—The proposed Lighthouses on Kennery, *which under any circumstances are indispensable*, and the retention of the outer Light in its present position will, with the existing Lighthouse at Colaba, amply and safely define the entrance into the harbour;

and such being the case, it was held to be unwise to move to another and a new spot a long-established and well known Light, not to speak of the enormous expense which would, in the opinion of the Commission, be thus needlessly entailed upon Government by the removal of the present Colaba Lighthouse to the site proposed by Captain Barker.

“3. Captain Barker agrees with the other members of the Commission as to the retention of the Outer and Inner Light Ships and of the Dolphin Rock Lighthouse in their present position.

“4. Captain Barker submits that the Commission have not complied with the instructions of Government as contained in Resolution No. 1102. The Commission in their Report have given their reasons for this, and it will rest with Government to determine whether the inquiry ordered shall still be carried out.



Barker submits that the Master Attendant should be the proposed Board for making and altering regulations for the efficient discharge of Port and Pilot duties. The members of the Commission are of opinion that it is not desirable that the Master Attendant should be both a member of the Board as the executive and responsible officer for carrying out their decisions and instructions. The Board will always hope that an officer so appointed by Government will retain their confidence; if so, he will invariably receive their support, and the Board will fail to seek his advice and assistance on every requisite occasion.

6. The detailed proceedings of the Commission are available to the Government desire to peruse them.

7. Captain Barker, during the Commission's proceedings, admitted the superior advantage of a double light on Kennery over a fixed red light, but now again starts his previous opinion that a double light is unnecessary, and that a single red or bright light would be more suitable. To this the majority of the Commission have to urge that the object of having a double Lighthouse on Kennery is to enable the Mariner *by day* or *by night* to determine at once that it is the Island of Kennery which he sees; this the *double Beacon* will ensure by day and the *double Light* by night, and there will be no possibility of the Lighthouses on Kennery being mistaken for the single one at Colaba. A Beacon exact in size and form with that of the Colaba Lighthouse was erected on Kennery in 1852, and at the very commencement of the first monsoon it led to the wreck of the ship *Christian*, and was blown down by order of Government to prevent further disaster. This the majority of the Commission consider a sufficient commentary on any renewed proposition for a single Lighthouse on Kennery.

8. On the subject of a single Red light on Kennery having, as Captain Barker states, been supported by a large majority of nautical and experienced men, the other members of the Commission have only to add that the proposal for a double fixed light on Kennery was not circulated for opinions in the harbour or else-

where ; the Commission did not consider it necessary and had they done so, they have no doubt the proper course would have taken precedence in public opinion of all those noticed Master Attendant.

J. YOUNG, Captain, I. N., *President*,  
 G. INVERARITY, Commissioner of Customs,  
 R. HANNAY.  
 A. GRANT, Agent to Lloyds.  
 W. JOHNS.  
 J. DIXON, Surveyor to Lloyds.  
 A. DELISLE, Lieutenant Colonel, R.E.  
 J. FARRAR."

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8. On receiving the above report Government desired the Commissioners to report further whether they consider any substitution of a Light-house on the Prongs for one at Colaba objectionable in itself, or merely not worth the expense ; and to state more fully the grounds of their objecting to the Master Attendant having a seat on the Board proposed by them ; and Government ordered a copy of the Commissioners' report to be sent to the Chamber of Commerce.

9. The following papers were laid before Government subsequent to their disposal of the Report of the Commissioners, and they are now printed in full for greater clearness as to the opinions expressed in them :—

" No. 22 OF 1863.

to the SECRETARY to the CHAMBER of COMMERCE,

Major W. L. MEREWLTHIER, C.B.,

Acting Secretary to Government, Marine Department,

Bombay.

*Bombay Chamber of Commerce,*

*Bombay, 25th February 1863.*

" SIR,

" By direction of the Committee of the Chamber of Commerce, I have the honour to acknowledge receipt of your letter No. 155 of 1863, dated 14th February.

" The Committee of the Chamber of Commerce having carefully considered the Report on the Lighting of the Bombay Harbour, &c., concur in the opinions expressed by the Commission.

" They consider that with a double Light on Kennery, and the present Lighthouse at Colaba made one of the first class, it would be unnecessary, as well as unadvisable, to remove the present old-established Light.

" The proposal for a Harbour Board originated with the Committee of the Chamber of Commerce ; they consider that a Board such as the one proposed would strengthen the hands of the Master Attendant, but they are of opinion that it would be far from desirable to have the executive officer a member of the Board sitting as it were in judgment on his own actions.

I have the honour to be, &c.

H. BROOKE,  
Secretary."

“ From the COMMISSION appointed to consider the Lighting of  
Bombay Har

“ To Major W. L. MEREWETHER, C.B.,  
Acting Secretary to Government.

*Bombay, 27th February 186*

SIR,

“ In reply to your letter No. 155 of 14th instant, we have honour to inform you that we consider the substitution of a Light-house on the Prongs for the one at present on Colaba unnecessary for the following reasons :—

“ The proposed double Light on Kennery.

“ The present Colaba Lighthouse.

“ The Outer and Inner Light Vessels in their present position clearly and simply indicate the passage into the Harbour, a simple straight course from the Outer to the Inner Light Vessel leading ships safely into the Harbour.

“ The erection of a Lighthouse on the Prongs will not obviate the necessity of a Light in the position of the present Outer Light Ship, there being dangers eastward of a straight line from the proposed Lighthouse on the Prongs to the Inner Light Vessel, which do not exist in a straight line from the Outer to the Inner Light Vessels.

“ The Commission would not be justified in recommending the enormous outlay that would be required for the substitution of a Lighthouse on the Prongs for the one on Colaba, unless some good would be likely to result from it, the probability of which is not apparent. The expense of its construction has so far deterred the majority of the Commission from recommending it.

“ The Commission do not think that the erection of a Lighthouse on the Prongs would be likely to lead ships into danger, but the necessity for it is not seen.

...ce to the 2nd paragraph of your letter under  
 ...jority of the Commission object to the Master At-  
 ...having a seat at the proposed Board, because he being the  
 ...ve officer for carrying out the rules and regulations of the  
 ...would have to deliberate and vote on his own actions and  
 ...ct.

The opinion of the Commission as herein expressed, regarding  
 ...stitution of a Lighthouse on the Prongs, is concurred in by  
 ...members excepting Captain Barker; that regarding the ob-  
 ...o the Ma-ster Attendant having a seat at the proposed Board  
 ...excepting Captain Barker, Lieutenant Colonel DeLisle, and  
 ...ain Johns.

We have the honour to be, &c.

J. YOUNG, Captain, I. N.

G. INVERARITY.

J. FARRAR.

R. HANNAY.

J. DIXON.

W. JOHNS.

A. GRANT, Agent to Lloyd's.

A. DELISLE, Lieut.-Colonel, R.E."

*REMARKS by Captain BARKER on the Minute of the Majority of  
 the Commission on his Minute forwarded with the Report, and  
 also on Captain Young's Remarks on the Acting Secretary to  
 Government letter in the Marine Department No. 155 of 14th  
 February 1863.*

The several paragraphs of the minute of the majority are com-  
 mented upon as follows:—

*Para. 1.* "This statement is quite correct. My propositions  
 1 and 2 were supported by a large majority of nautical men; I did  
 not readily add my vote to those of the other members, *but merely*  
*yielded to the majority.*

*Para. 2.* "In this I yielded, being in the minority; but I would  
 observe that it has been fully proved by the many wrecks and dis-

asters we have had to deplore of late years, the Vessel is not sufficient to prevent vessels running up

*Para. 3.* "By removing the Lighthouse to the extreme the Prongs, as suggested by me, it will be  $1\frac{1}{2}$  miles nearer the danger it is intended to indicate than it is at present, stand out in bold relief from the land, and can be approached within  $\frac{3}{4}$  to 1 mile; at present it cannot be approached to  $2\frac{1}{4}$  miles from seaward.

*Para. 4.* "One Lighthouse on Kennery would answer desired purpose, provided the Lighthouse at Colaba was 1 to the end of the S.W. Prong, and would amply and safely the entrance to the Harbour (even should the Outer Light V break adrift, which has occurred several times). The expense removing the Colaba Light I consider the Commission had nothing whatever to do with, that being a matter for the Government decide upon.

*Para. 3.* "This is quite correct.

*Para. 4.* "I still retain the same opinion that the Commission have not complied with the instructions of Government, as laid down in Resolution No. 1102. The reason given by the Commission for not adhering to the instructions I do not agree with.

*Para. 5.* "If a Board is necessary, which I do not think it is, the Master Attendant and Conservator of the Port should be a member thereof. Act XXII. of 1855, framed by the Legislative Council of India, confers certain powers on the Master Attendant and Conservator of the Port entitling him thereto.

*Para. 6.* "I am of opinion that the proceedings should have been sent in without wanting to know whether Government were desirous or otherwise of receiving them.

*Para. 7.* "There cannot be the slightest doubt that two bright Lights would show better than one Red Light. The object in my recommending a *Red Light* was to render the Kennery Light as distinct as possible from the Colaba Light; but this is a mere matter of opinion. The double Light on Kennery I do not think at all necessary. The latter part of this paragraph I hesitate not to state is a mistake. The Beacon on Kennery Island was as different

to make it from the Colaba Lighthouse. The house is a round building perfectly smooth and chiselled white, has a dome with platform and a rail flagstaff which rises considerably above the dome, two signal yardarms, and all the appurtenances belonging to a Lighthouse, whereas the Beacon on the Prong on approaching from seaward had the appearance of being a round, flat-topped, tapering to the top, of rough stone of a darkish tinge. The Commission advanced one solitary instance of a vessel having been supposed to be lost through the Beacon being erected there, and we have proof of many having been lost for the want of a guiding mark.

*Para. 8.* “At the first meeting of the Commission a Secretary was appointed who was authorized to get the several propositions improving the Port printed and circulated. Twenty-five copies were printed; each member of the Commission was furnished with a copy; the other copies were circulated amongst the shipping. The second meeting of the Commission was deferred to allow time to circulate and to obtain the opinion of nautical men thereon.

“A long interval was allowed to elapse between the first and second meetings of the Commission for the express purpose of circulating all the propositions relative to the improvement of the lighting up the entrance to the Harbour, &c., and the said papers were duly circulated by the Secretary, and the Commission were informed thereof.

“I am therefore at a loss to understand the assertion contained in the latter part of this paragraph.

“In conclusion I would observe that the great advantages to be derived by moving the Light on Colaba to the extreme end of the Prong, retaining the Outer Light Vessel, and building a Light on Kennery, are as follows:—

“Vessels coming from the southward—

“Outer Light Vessel and Lighthouse on the Prong in transit puts the Mariner on the edge of Kennery Flat, and therefore is a guide on approaching that danger;

“Vessels coming from the northward—

"Outer Light Vessel in transit with Light Vessel  
will take vessels well clear of the foul ground off the

W. C. BARKER, Retired Captain, H. M. I. N.,  
Master Attendant and Conservator of the

*Bombay, February 1863."*

10. A copy of all the foregoing papers were ordered  
Marine—No. 517 of 14th Government "to be transferred to the  
May 1863. Works Department, with a view  
ment of the following proposals of the Commission :—

"The substitution of a first class Light at the Colaba Light

"The fitting of plate glass at the Dolphin Rock Light.

"The construction of Lighthouses at Kenmery.

"As respects the dissent by Captain Barker, the Master  
Attendant, on certain points, Government saw no reason  
to doubt the soundness of the opinion of the majority,  
excepting perhaps on the one point of removing the  
Colaba Lighthouse to the Prongs."

"The arguments show that the Prongs would be the better  
"position irrespective of expense. The expense may be greater  
"than the amount of improvement would warrant, but it is worth  
"while to know what that expense would be. Captain Barker  
"should place himself in communication with the Engineer of the  
"Harbour Defences, and learn what might be the probable cost of  
"the measure."

11. A copy of all the papers was sent to Her Majesty's  
Marine.—Despatch No. 66 Principal Secretary of State for India on  
of 3rd June 1863. 3rd June 1863, with a recommendation  
that the same may be submitted to the Hydrographer to the  
Admiralty.

12. A further despatch was sent to  
Marine.—Despatch No. 39 the Secretary of State on the 22nd June  
of 3rd June 1863. 1863 as follows :—

"We have the honour to submit the accompanying copies of  
proceedings taken with a view to better lighting of Bombay Har-



hour,                      to attention to the proposals of the Commission  
 as for due inquiry.

2. The principal proposals are the substitution of a 1st class light at the Colaba Lighthouse, and the construction of Lights on Kennery Island. In order to carry these into effect we ask your assistance in procuring the Lights.

3. For making the specification for these Lights we respectfully suggest that the services of the Engineer to the Trinity Board be obtained, and that he be authorised to contract with the most suitable maker for the supply.

4. The Revolving Light for Colaba Lighthouse should be a dioptric Holophotal Light of the 1st order. It has to show 20° of sea horizon, and the time of flash should be as long as can be arranged, so that in the thick weather of the monsoon it may be more visible than a quick flashing one would be.

5. The fixed Lights for Kennery Island will require 200° of sea horizon. The Island is 100 feet above the sea; it is proposed that Lighthouses 80 feet high be erected from which these Lights should be shown.

6. The Engineer's opinion might also be asked as to the distance they should be apart to secure their showing double at 20 miles distance throughout the semi-circle to seaward, and whether it be necessary that these Lights should also be of the 1st order.

7. The cost of these Lights will be defrayed from the Bombay Port Fund."

Marine.—No. 88, dated 31st August 1863.

13. The following reply was received from Sir Charles Wood, dated 31st August 1863:—

"Prior to the receipt of your Marine letter dated the 2nd of June last, No. 39, in which you have asked my assistance in procuring certain lights with a view to the better lighting of Bombay Harbour, the enclosures to your letter of the 3rd idem, No. 36 (which are the same as those subsequently forwarded with the letter No. 30) had been transmitted to the Lords Commissioners of the

Admiralty, to be brought to the notice of their Hydrographer in accordance with your recommendation.

"2. I now forward for your information a copy of a letter  
 Dated 8th August 1863. the Board of Trade from which  
 will observe that the Lords Commissioners  
 of the Admiralty referred the question to that Board, together  
 with a report from their Hydrographer upon the proceedings submitted by  
 Dated 28th July 1863. Copies of that report, and of a Memorandum by Captain S  
 R.N., C.B., the adviser of the  
 Dated 8th August 1863. of Trade in Lighthouse matters, as  
 furnished to you herewith.

"3. Having considered these papers in Council, I am  
 opinion that it will be better that I should not take any steps  
 towards complying with the requisition conveyed in your letter  
 No. 39 until you shall have had the advantage of perusing the pro-  
 fessional remarks contained in those papers, and the opportunity  
 of possibly modifying the view you had previously formed with  
 respect to the number and nature of the Lights required.

"4. I shall therefore await a further communication from your  
 Government upon this important subject, in which communi-  
 cation I request to be afforded the fullest possible information in  
 this country in giving complete and speedy effect to the final  
 decision at which you may arrive for the better lighting of the  
 Harbour of Bombay."

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"To the UNDER-SECRETARY OF STATE FOR INDIA,  
 India Office, S. W."

"SIR,—I am directed by the Lords of the Committee of Privy  
 Council for Trade, to acquaint you, for the information of the  
 Secretary of State for India in Council, that the Lords Commis-  
 sioners of the Admiralty have forwarded to this Department, for the  
 information of the Board of Trade, the printed copy of proceedings  
 on the subject of the Lighting, &c. of Bombay Harbour, received  
 by them from the India Office, also a report from the Hydrographer  
 of the Admiralty on the subject.

I understand that these papers were sent by the Admiralty in compliance with a wish expressed by the Bombay Government.

My Lords have referred the papers to Captain Sullivan, R.N., Adviser in Lighthouse matters, and direct me, in transmitting (enclosed) the report from the Hydrographer of the Admiralty above referred to, to transmit also the enclosed Memorandum to Captain Sullivan.

I am,  
Sir,  
Your obedient  
servant

I have, &c.

W. D. FANE.

Office of Committee of Privy Council for Trade.

Marine Department, Whitehall, 8th August 1863."

## LIGHTING THE APPROACHES TO BOMBAY.

"Although the India Board, when requesting in this letter 'the notice of their Lordships' Hydrographer' to the proceedings on the lighting and pilotage of the Port of Bombay, might not have been aware that these subjects are now turned over to the Board of Trade, their Lordships might consider the following brief remarks on the former of these subjects as not unworthy the attention of that Board.

"The natural formation of the coast land about Bombay in the low character of Colaba Point, the shoal approaches to the shore immediately to the southward, and the receding position to this land itself, all contribute to render the question of lighting the approaches to Bombay, in a manner satisfactory to the seaman, a subject for very careful consideration.

"The full measure of difficulty arising from this condition of coast about the mouth of an important Harbour is mostly found by seamen in the S. W. monsoon. Arrived there in foul weather with a strong gale when the land is concealed by mist or rain, and the shoal flat approach abovementioned is a wide waste of broken water, with his lead as his only guide, it is then that the absence of some off-lying islet with a beacon on it is keenly felt, and then that

between the squalls of rain when attempts have been made to save the land that ships have been irretrievably lost.

“Still Bombay is not a Harbour the approaches to which should be allowed to remain in their present condition ; the importance of its position, its depth of water, large extent and connection with interior navigation, along with its great security and capabilities of improvement in regard to the requirements of a first-rate mercantile Harbour, point to it as a place of immediate attention where improvement should at once be made with earnestness.

“Looking then on Bombay in this light, attention must be directed to its approaches from sea. The principal want is evidently an outlying Beacon to apprise the mariner of his proximity to the Harbour, and the first thing to be done is to select for ourselves of the most outlying land for that purpose. That would evidently be Colaba Point, which would give a position for a Lighthouse about a mile and a half to the S. W. of the present light, and assuredly this is the site on which this light should have been erected.

“Colaba Light in this position would therefore be on the most salient point (as it should be) of the coast, and would be most favourably placed for being seen by vessels approaching the Harbour. It should be a revolving light as at present, but instead of the unreasonable interval of  $2\frac{1}{2}$  minutes of darkness its period should not be more than half a minute (or even less), and it should have an horizon of 21 miles distance, and should be one of the best possible lights that could be procured.

“The present arrangement of an outer Light Vessel in the fairway of the entrance should be preserved, and the utmost pains should be taken, by giving her strong ground tackle, to enable her to keep her station in all weathers, and to prevent that breaking adrift which has occurred at a time when the assistance of her light is most wanted.

“The position of this Light Vessel would be about  $2\frac{1}{2}$  miles South by West of the site of the new Lighthouse on Colaba Point, a position but little in advance towards the offing. But in addition to her light if she could be provided with a steam whistle, such as

used. The Island Lighthouse in the bay of Fundy, she  
 1. The warning to vessels six or seven miles in the offing  
 2. the wind's eye of her. This in the bad weather of the  
 monsoon would be invaluable, and no pains should be spared  
 to put this apparatus in efficient working order, as it would be an  
 al safeguard for vessels that make direct for her in foggy  
 weather.

Still in ordinary bad weather it also appears desirable that  
 vessels bound to Bombay should have a warning of their approach  
 at a place outside of this light. It has been proposed to place  
 a house on piles about 7 miles S. W. of the present Colaba  
 house. This would be an experiment which might or might  
 not succeed. A vessel even running foul of it might place the  
 light keepers in imminent danger that might prove to be fatal.  
 A less dangerous method, and one by no means so expensive,  
 would be to moor a ball beacon (not so far out) such as is in use  
 at a place called Spaner's Spit in the rock channel at Liverpool.  
 This beacon, formed by a small vessel of compact shape, sharp at  
 both ends, and decked over to keep out the sea, securely moored  
 with heavy ground tackle in 6 fathoms water, carrying her ball at  
 a moderate height, might ride well even when the Light Vessel  
 had parted, and if she too should break adrift, would only cost  
 the trouble of being replaced.

"In the dark rainy and misty weather of the S. W. monsoon  
 such a beacon might guide vessels bound to the Harbour of Bom-  
 bay to the position of the Light Vessel, and eventually enable them  
 to enter it.

A. B. BECHER,  
 For Hydrographer.

*Hydrographer's Office, 28th July 1863."*

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## MEMORANDUM BY CAPTAIN SULLIVAN, R.N.,

LIGHT, &amp;C., BOMBAY HARBOUR.

“ If in the first place the question of expense is set aside, I no hesitation in recommending the plan of Captain Barker, w founded on the following and now well established rules for lights :—

1. The light should be as near as possible to the danger
2. Where practicable a Lighthouse should be preferred to a Light Ship.
3. A single light distinguished by its character should be used in preference to the now obsolete plan of double fixed lights.

“ 2. Supposing it to be desirable to do away with the Light Vessels, as recommended by Captain Barker, the Colaba Light should certainly be placed on the extreme of the Point at low water, or as near it as a safe foundation can be obtained. If that cannot be found, a screw-pile Lighthouse would, I think, answer for that position. It should be a first order revolving light of one minute interval, and not less than 100 feet above high-water.

“ 3. If a Martello Tower were erected on ‘Sunken Rock’ it would be in an admirable position for the defence of the Port, and a light on it would have the great advantage over a Light Vessel of enabling a band of coloured light to be used to guard vessels from the dangers outside; and thus with the better position of the Colaba Light, both Light Vessels might be dispensed with. Even if the Martello Tower were not built, it might be worth erecting either a pile or stone Lighthouse on the rock, and shifting the position of the Colaba Light in order to save the cost of two Light Vessels. But if neither of these plans is adopted, both Light Vessels should be retained as recommended by the Commission, and the removal of the Colaba Lighthouse would then be of less importance.

“ 4. Both the Commission and Captain Barker agree that it is important to place a light on Kennery Island, and of this there can be no doubt; but the Commission think it necessary to distinguish

light by two lights. This is quite unnecessary, even the erection of a fixed light in the Outer Vessel prevents a fixed light being placed on Kennery Island. One of the best and most effective lights now used is a flashing dioptric light of 10 seconds duration. It cannot possibly be mistaken for a revolving dioptric light with an interval of a minute; where not absolutely necessary for distinction, no dioptric revolving light should have a longer interval than one minute, as the period of brightness is so short in comparison with that in the old catoptric revolving lights, that at a long interval they are more difficult to make out.

5. I have therefore no hesitation in recommending that a first order flashing 10 seconds light should be placed on Kennery Island in preference to the two lights recommended by the Commission. As the Island is 100 feet high, a Tower of 50 feet would be sufficient, unless trees which cannot be cut down require a greater height, as there is no advantage in having the light more than 150 feet above the sea. The shorter Tower would prevent its being mistaken for Colaba, and for greater distinction one should be painted with verticle red and white stripes, and the other with horizontal ones.

“6. There is another arrangement of the lights which would equally answer the purpose, and would make the floating light more powerful if that is considered desirable.

“7. It is to make the outer floating light a minute revolving light with three reflectors on a face, such as are used in several new Light Ships in this country. Then the Colaba Light should be a 10-seconds flashing light, and Kennery Island a first order fixed light.

“8. It might be difficult to alter the Colaba Light to a first order, as a lantern 13 feet diameter is required, and the Tower may not be large enough; for a second class light a lantern of 10½ feet only is required, and as the dioptric lights have now been so much improved, a second order light might be sufficient. The revolving and flashing lights of the second order are more powerful than fixed lights of the first order.

“9. The danger of the Light Vessel driving might be lessened by having a set of mushroom moorings and chains, such as are in use by the Trinity House, sent from England.

"10. The estimates given in the papers for pile Lighthouses are far less than their cost has been and this country.

B. J. SULIVA.  
Board of T

8th August 1863.

14. The Government of Bombay ordered that copies foregoing papers, from the Sc of State, should be sent to the Board.

Marine.—G. R. No. 1125 of 28th October 1863.

15. In the beginning of 1864 Government desired Harbour and Pilotage Board to sc the correspondence on the subject lighting the Harbour to Mr. Parkes, C.E., at Kurrachee, for the gentleman's opinion as to the exact position and construction of any additional lights which may be requisite to carry out the views of Captain Barker. So far as they are supported by the opinions expressed in the accompaniments to the Secretary of State's Despatch (see paragraph 13 ante) Mr. Parkes was also to state probable cost of such Lighthouses, and the course he would propose to ensure their early and effective completion.

16. The reply of the Harbour and Pilotage Board, and Mr. Parkes' report which they handed up, are given below in full :—

" To the SECRETARY TO GOVERNMENT.

" SIR,—We have had under consideration the letter from the Right Honourable the Secretary of State for India, No. 88 of the 31st August 1863, with its accompaniments, in connection with the improvement of the Lights of the Harbour of Bombay, and after due deliberation, beg to state, for the information of His Excellency in Council, that notwithstanding the decision come to by the Pilotage Commission appointed by the Government of Bombay, under Notification of the 25th October 1862, that a removal of the present Lighthouse at Colaba is not called for, and although great consideration is due to the view thus expressed,



as ~~it~~ appears to be a large preponderance of opinion  
 vote ~~of~~ removal of the Lighthouse from its present position  
 edge of the danger, or as near thereto as practicable, not  
 among the highest authorities in England, but also among  
 conversant with such matters, on the spot, we would not be  
 in recommending to the Government to carry out the  
 proposed by the Commission, so far as regards the Colaba  
 and would suggest that the light be removed from its  
 position to the extreme edge of the South-West Prong,  
 dries at low-water spring-tides or as near thereto as safe  
 station can be found.

"2. In compliance with the request of Government, com-  
 municated to us in Secretary Lieutenant Colonel Marriott's letter  
 No. 106, dated 10th February 1861, we have been in communica-  
 tion with Mr. Parkes, C E, during his recent short visit to Bombay,  
 and have been favoured by that gentleman with a report which we  
 now submit in original.

"3. In this report it will be seen that Mr. Parkes advocates  
 a single Lighthouse at Kennery, the buildings to consist of a  
 central Tower 80 feet high, and at a distance of 50 yards North  
 and South, Light-keepers' dwellings connected with the Tower  
 by crenellated walls. The Tower to exhibit a single light flash-  
 ing every 10 seconds; or supposing the outer Floating Light could  
 be made red, without objection, it is suggested that Kennery be  
 then made to show a bright fixed light. This opinion coincides  
 with that seconded by Captain Sullivan.

"4. Mr. Parkes further advocates the substitution of a Light  
 on the Prongs in place of the present Colaba Lighthouse  $1\frac{1}{2}$  mile  
 from the present Lighthouse and  $\frac{1}{2}$  mile from the deep-water  
 Channel. He estimates the cost of this Lighthouse at £24,000,  
 which amount we fear will eventually be found much within the  
 necessary outlay. The substitution of a Tower in place of the  
 present Inner Light Vessel he leaves to be determined by the  
 local authorities.

"5. A light flashing every 10 seconds possesses doubtless a  
 marked distinction over one that revolves once only in a minute,  
 and the difference in ordinary times would be easily detected,

but we are of opinion that the distinction would be lost in stormy weather, and that therefore the distinguishing a double fixed bright light at Kennery is indispensable. More care must be taken that the light be not capable of confusion with the jungle fires on the hills in the back ground, and the effect to be considered can best be secured by the double fixed light recommended.

“6. We have not yet been able to obtain an estimate of the probable cost of erecting the proposed double Lighthouse at Kennery, but as there is a large quantity of good stone on the island, and no engineering difficulties to contend with, we believe the cost would not be very great, and as we consider it of the utmost importance that this work should be undertaken immediately, we beg to urge on Government the necessity for an early decision being arrived at respecting it. Whether the Colaba Light be ultimately removed or not, all parties are agreed upon the necessity of a Light on Kennery, and no reason now exists for the erection of the latter not being forthwith sanctioned and commenced.

“7. As the Port Fund is not in a condition to bear the cost of the proposed Lighthouses, we solicit the aid of Government towards defraying the same, and are confident that in a work of such national importance this aid will be readily given.

8. The substitution of a Tower Lighthouse on the Sunken Rock can be hereafter considered as soon as the work has been decided to be feasible, and its probable cost ascertained; there is no immediate necessity for the alteration in this respect suggested by Mr. Parkes.”

## REPORT OF WILLIAM PARKES, C.E., ON LIGHTING THE APPROACHES TO THE PORT OF BOMBAY.

*Bombay, 28th March 1864.*

“To the SECRETARY HARBOUR and PILOTAGE BOARD, Bombay.

“SIR,—In compliance with your instructions to me forwarded upon a letter from the Secretary to Government to the President

of the Land Pilotage Board, dated 10th February last, I have the honour to report to you the result of my investigation of the above question.

It is not within my province to discuss the various nautical elements which have been brought forward.

I conceive that the principles laid down in the Memorandum obtain Sullivan, the highest authority of the day in Lighthouse matters, may be taken as established, and it only remains for me to set out how, and to what extent, they may be carried out.

The recommendations to which these principles lead are—

- I. A powerful sea light on the Island of Kennery.
- II. The removal of the Colaba Light to the most southerly practicable position on the South-West Prong.
- III. The substitution of a Lighthouse on the Sunken Rock for the Inner Light Vessel.

“With regard to the first of these points little need be said. The Island consists of two knolls, the southernmost of which is rather the higher, but does not present sufficient surface for buildings of such a distinctive character as is required.

“The northernmost knoll is in every way suitable for the purpose, and I would recommend that the buildings consist of a central tower 80 feet high, and at a distance of 50 yards north and south, light-keepers’ dwellings connected with the tower by crenelated walls. This will present a range of buildings towards the sea, which during the day will enable the seaman at once to identify his position.

“At night a light flashing every 10 seconds will give a marked distinction from any other light in the neighbourhood, or if it should not be thought objectionable to make the outer Floating Light red, the Kennery might be a bright fixed light. This would effect an economy of about £1,000.

“On the other hand the objection to establishing a new fixed light so near to the other Outer Light Vessel, where one of a similar description has been long in action, should have its full weight. The decision of this question should be left to the nautical authorities.

"The erection of the buildings on Kennerly is a simple and inexpensive operation. The island contains the fortifications abundance of suitable stone ready quarried, good supply of fresh water. There is landing on the east in all weathers.

"I have conferred with Lieutenant Colonel Jones, who has given much consideration to the matter, and have furnished with some details of the special requirements for a Light. He will submit to Government a design for the buildings, concerning the general features we have together determined concerning buildings in a similar situation off the coast of England would cost from £3,000 to £4,000, and the lantern, light apparatus, and other details sent from England, and their erection, would cost under £4,000 or £5,000 in addition according as the light be fixed or flashing.

"The removal of the light from Colaba Point to the Prongs is a more complicated question. I visited the proposed site in company with Captain Barker and Colonel Jones, and a spot was found suitable for the foundation  $1\frac{1}{2}$  mile S. W. from the present Lighthouse, and  $\frac{3}{4}$  mile from the deep-water channel off the end of the Prong. It would of course be practicable at a greater expenditure of time and money to place a light upon a site still further seaward, though I was informed that the site we visited was the outermost piece of solid rock; but even if time and money were not considered, I doubt if much advantage would be gained by going further out. There can be no doubt that the proposed site would be a great improvement upon the present site, and if it do not fulfil all the requirements of the optimist, I think it would be a great practical boon to the navigator.

"Colonel Jones and myself have conferred together upon the mode of construction, and he will submit a design based upon a Sketch I prepared, and which he approved, for a Stone Lighthouse, in which the light will be 150 feet above low water, or 18 feet higher than the present Colaba Light. I may state that the peculiarity of this climate offers a great advantage over that of England for the construction of all works within range of the tide. Though during the four months of the S. W. monsoon the work must be ex-

ed to the off of sea, yet during the remaining eight months  
 the or no danger or interruption to the work is to be  
 ted, and consequently the precautions which are necessary  
 coast of England to secure against a storm which may come  
 need only be taken once a year at Bombay. This simpli-  
 work materially, dispensing with all those ingenious but  
 contrivances for locking and dovetailing the stones together  
 are sometimes assumed to be an essential feature of Light-  
 construction, but which are really unnecessary except where  
 while in progress is liable to be acted on by heavy seas.  
 The light should be a holophotal dioptric revolving one of the  
 first order,\* showing a flash once a minute. This as well as the  
 mern (of gun metal), the top gallery and floors of cast iron, and  
 stairs of wrought iron, should be manufactured in England. The  
 cost of these portions of the work, including freight and erection,  
 would be about £4,000, but I should state that this estimate, as  
 well as that for the corresponding articles for Kennery, is only  
 approximate. To make an exact estimate it would be necessary  
 to refer to documents which I have not with me. Of the cost of  
 masonry Colonel Jones will furnish an estimate. The cost of a  
 similar Tower on the English coast, where suitable stone could be  
 obtained as near as Bombay, would be probably £20,000, or, includ-  
 ing the £4,000 above named, £24,000 for the complete Lighthouse.

“In order to carry out this work quickly and economically the  
 first requisite is an experienced practical foreman (European or  
 native) to superintend the landing and placing of every stone, and  
 a small but efficient staff of workmen, the whole of whom should be  
 irremovable from the work by any other authority but that of the  
 Engineer in immediate charge. I expect that four seasons will be  
 occupied with the work, but with a good and permanent staff it will  
 progress steadily and without drawbacks, becoming also as it in-  
 creases in height more and more valuable as a day beacon during  
 thick weather. When completed it will be a structure worthy of

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\* Captain Sullivan suggests that it should be of the first order, and before the  
 second order is adopted the matter should be referred back to him with the suggestion  
 that two first order Lights so close together as Kennery and the Prongs would be  
 are unnecessary.

the approach to such a Port as Bombay, which the Lighthouse certainly cannot, so far at least as it is concerned, be considered.

“With regard to the third point, the erection of a Light on the Sunken Rock, to replace the Inner Light Ship, I can say but little. The tides during my stay at Bombay did not give opportunity of examining the rocks, so I can give no opinion building upon it. Should the Prongs Lighthouse be erected, the Engineer in charge will obtain a special and local experience which will make him a better judge in the matter than I can.”

“Even if commenced a year later it might probably be finished as soon, or nearly as soon, as the Prongs Lighthouse, and Cap. Sullivan’s suggestion, that by the employment of direction beams of colour from the Sunken Rock light the Channel might be so well marked as to dispense with both Light Ships, be carried out simultaneously with the exhibition of the new Prong’s light. This, however, is a nautical, rather than an engineering question, and I allude to it only to show how the whole system may be brought to bear if approved by the nautical authorities. The establishment of the Prong’s light, however, I take to be a question independent of any possible future change in the floating lights, and connected with the latter only so far as it will facilitate that change if on other grounds it be considered desirable.”

Marine.—G. R. No. 337 of 17. The orders of Government on 13th May 1864. the above were as follows:—

“Beside the Port Fund, the Pilotage Receipts have been placed at the disposal of the Harbour Board, and these have hitherto exceeded the expenditure by above Rs. 50,000 per annum.

“If the cost of the Kennery Lights cannot be defrayed therefrom, the matter must be clearly explained for the satisfaction of the Government of India.

“The Government would of course be willing to advance the money, if necessary, on a clear understanding of repayment by instalments.

“The Government quite agrees in the proposal to build the double Lights at Kennery Island, and to remove the Colaba Lighthouse to the spot indicated in the Board’s letter.”

18. The Harbour and Pilotage Board addressed the following representation to Government:—

28 or 13th June 1864.

With reference to the Government Resolution No. 337 of the ultimo, the Bombay Harbour and Pilotage Board request the issue of an intimation of the measures which are in progress for financing the new Lighthouses at Colaba and Kennerly, and for bringing the work to an early completion. The Board regret to find that it is in contemplation the works should be executed from the funds at present at their disposal, as these are quite inadequate to the outlay, nor have the Board any authority as a corporate body to raise money by loan for the purpose upon the future revenues of the Port Funds.

"2. The Board are of opinion, as a large surplus has for many years past been derived from Pilotage, and from those sources of Harbour revenue which existed before the Port Funds Act was brought into operation, and which surplus it is possible may have from time to time been credited to the Imperial Revenues, that the cost of the new works may with propriety be devolved upon the State, to be defrayed out of profits which have so accrued; otherwise the Board do not see how the Lighthouses can be constructed, for it is within the recollection of His Excellency in Council that the whole balance of the Bombay Port Fund up to the close of 1862-63 has already been appropriated by Government in anticipation of the reclamations at Modree Bay, and to require the Harbour Board to construct the new Lighthouses out of the current revenues of the Fund would be simply to defer for several years the completion of works which have been on all sides unanimously pronounced to be of the most emergent necessity.

"3. Should Government nevertheless be of opinion that the current revenues of the Port Fund should bear the cost of the new Lighthouses, the Board request the favour of being informed in connection with paragraph 1. of this letter of the officers by whom the estimates are being framed, the probable amount of the latter, and the amount of the annual instalment which the Board would be expected to pay back in liquidation of any advance which Govern-

ment may be disposed to make in order to secure immediate commencement of the work.

“4. The Board in conclusion beg to lay before Government their opinion that it is desirable the whole unclaimed Foreshore of the Harbour should be placed at their disposal for the better Harbour Improvements, as is the case under similar circumstances throughout the United Kingdom, and solicit that the necessary instructions to this effect may be issued.”

Marine.—G. R. No. 457 of 28th June 1864. And Government issued on the following orders :—

“To the request now repeated that the cost of the K Lights should be defrayed from Imperial Funds, because of the sufficiency of the Port and Pilotage Funds, the Government only reply as in the Government Resolution No. 337 of 13th M that the insufficiency must be clearly explained for the satisfaction of the Government of India, without whose sanction His Excellency in Council has not authority to comply with the request.

“2. The Public Works Department will now be requested to prepare plans and estimates of the Kennery Lights, and when the probable cost is known, the means of execution will be reconsidered.

“3. As respects the removal of the Colaba Lighthouse, the 6th paragraph of the Board's letter, No. 44 of 25th April, suggested the postponement of that work until the completion of the Kennery Lights. But the Public Works Department will be requested to prepare an approximate estimate sufficient for decision as to the means of execution.

“4. The request that the whole unclaimed Foreshore of the Harbour should be placed at the Board's disposal for Harbour improvements is not fully understood. If it be meant that it should be at the Board's disposal for sale, or any other such purpose, it cannot be conceded.”

19. On the 9th of December 1864 Government received, in the Marine Department, the plans and estimates from the Public Works Department (as called for in the orders, *vide* preceding



paragraph

construction of two Lighthouses, one on the Prongs, to cost Rs. 5 lakhs, and the other at Kennerly to cost Rs. 2,69,120. The whole of these papers were, on the 28th September 1864, made over to the Harbour Board, with an inquiry if the Board will be prepared with an annual contribution towards undertaking.

The reply of the Board is given below :—

I am directed by the Harbour and Pilotage Board to acknowledge the receipt of the Government Resolution in the Marine Department, dated 28th January 1865, of the 28th ultimo, on the proposed new Lighthouses.

"2. The following are the average receipts and disbursements annum of the Funds at the Board's control :—

	Receipts. Rs.		Disbursements. Rs.
Port Fund.....	1,20,000	.....	1,02,580
Pilotage .....	1,46,000	.....	66,480
	<hr/>		<hr/>
Total....	2,66,000	.....	1,69,060
	<hr/>		<hr/>
	1,69,060		
	<hr/>		

Estimated annual surplus .. Rs. 96,940

"3. Out of this estimated surplus repairs to wharves and all extraordinary expenses in connection with the Harbour have to be met, and these it is apparent will increase instead of decrease annually with the growth of the Port.

"4. It will therefore be evident to His Excellency in Council how very small the sum is at the Board's disposal for the construction of important and extensive works such as the Lighthouses under consideration.

"5. It is also to be borne in mind that the Board has been started by Government almost without any surplus balance in its favour; that the surplus of previous years, both from the Port Fund and Pilotage, has been retained by Government; that the latter is also absorbing the profits derivable from the sale and reclamation of the Foreshore of the Harbour; that no Harbour improvements to

speak of have up to the present day been effected, and that those which are essentially required, such as houses, have yet to be completed.

"6. The Board is therefore respectfully of opinion that important and extensive improvements should be largely aided by Government from the surplus of previous years, and the amount above adverted to now in its hands, and consider that the sum of Rs. 7,69,120, now required for the Lighthouses, would form an inconsiderable deduction out of the said profit.

"7. Nevertheless should His Excellency in Council ascertain that the existing reserve of the Board is fairly liable for a part of the proposed outlay, the Board directs me to state that it will be ready to contribute to the extent of Rs. 50,000 per annum out of the surplus mentioned in paragraph 2 for such time as Government may consider necessary."

"8. It is indispensable, however, that the work of the Lighthouses should be proceeded with, and brought to a conclusion with as little delay as possible, the funds for the purpose being advanced by Government."

And upon this Government ordered that copies of the correspondence on this subject, with the plans and estimates, should be sent to the Government of India, with a recommendation that the cost of the Lighthouses may be defrayed by Government in the first instance, repayable at the rate of Rs. 50,000 per annum from the Harbour Funds.

21. On the 5th August 1865 a copy of the correspondence since February 1864, as given above (beginning with the letter of the Harbour Board No. 106 of 1864, paragraph 15 ante, and ending with letter to the Government of India No 177 of 1865) was sent to the Secretary of State, with the remark that "it will be seen that the final proposals of the Harbour Board agree with the recommendations of Admiral Sullivan, excepting that they maintain their recommendation for a double light at Kennery Island for the sake of more certain distinction from the Colaba Lighthouse and the floating lights."

Marine.—G. R. No. 177 of 27th March 1865.

Marine.—No. 28 of 5th August 1865.

22. Provision was made in the Imperial Budget 1865-66\* of the Bombay Presidency for the construction of the Lighthouses on the Prongs and at Kennery; but until the formal sanction of the Government of was received no steps towards the commencement of the could be taken.

3. The reference to the Supreme Government, which was made in the letter No. 177 of 27th March 1865, in the Marine Department (see of 8th July 1861. 1865, in the Marine Department (see of 20 ante) was replied to by the Government of India as follows :—

“I am directed to acknowledge receipt (by transfer from the Home Department) of your letter No. 177, dated 27th March last, submitting plans and estimates for two Lighthouses for the Bombay Harbour, one on the Prongs and the other at Kennery Island, and asking sanction to the cost of the works (Rs. 7,69,120) being defrayed in the first instance from Imperial funds, repayable from the Bombay Harbour Funds at the rate of Rs. 50,000 per annum.

“2. In reply I am directed to state that the Governor General in Council is clearly of opinion that the arrangement proposed of advancing from the Imperial revenue the fund required for the construction of the Lighthouses in question, to be repaid from the Port fund in fifteen years, would involve the same difficulties financially as constructing the works absolutely out of Imperial revenue. The immediate provision of 7½ lakhs would be just as inconvenient, and the subsequent repayment of half a lakh a year would be of little use to the finances, while it would hamper and interfere with the action of the new Port trust.

“3. In sanctioning the Port Fund for Bombay, and requiring that from it should be met the Port charges of all sorts, including lighting, reference was not intended to large projects, such as those now submitted, but only to the ordinary charge for maintaining and repairing Lighthouses and ordinary improvements. There appears therefore to be no bar, as the Government of Bombay seems to understand, to undertaking these projects as Imperial works.

"4. And moreover it seems to the Government of India that the construction of these Lighthouses is a work which very properly be carried out from the special fund for improvement of Bombay, created from the proceeds of the sale of land in the island. If therefore on the review of the prospects of this lately ordered it is found that it will meet the charges proposed to be debited to it, leaving a reasonable surplus, His Excellency's Council is of opinion that these Lighthouses may also be included among the works debitable to it, and the projects should be carried out accordingly.

"5. Otherwise it would remain to include the projects in the usual way in the Imperial Public Works Budget, if their claims are considered sufficiently urgent, to displace other works, and if not of sufficient urgency to be so dealt with the work should be postponed."

24. This letter being transferred to the Public Works Department for consideration, the following representation was addressed to the Government of India from that Department on the 7th October 1865:—

P. W. D.—No. 2147 of 7th  
October 1865.

"I am directed to acknowledge your letter No. 685c, dated 8th July 1865, to this Government, in the Marine Department, conveying the orders of the Government of India on the subject of undertaking the construction of the Lighthouses on the Prongs and at Kennery from the sale of Land Fund.

"2. In reply I am directed to observe that the state of this special fund having been minutely reviewed by this Government in its letter No.  $\frac{1030 \text{ C.W.}}{2070}$ , dated 28th ultimo, in accordance with the wishes of the Government of India, it is hoped by this Government that no further objection will be taken by the Government of India to the immediate commencement of these most necessary Lighthouses, which may be undertaken as a debit to the sales of Land Fund.

"3. With reference to the observations of the Government of India, that the Lighthouse should not be charged to the Port Funds, contained in the 3rd paragraph of your letter under acknowledgment,

I am desirous to say that this Government will not press the matter of debiting the work to that source, especially as it is now proposed to defray the necessary expenditure from the sales of Land Fund.

24. Should the Government of India sanction the immediate commencement of the Lighthouses, I am desired to observe that the funds required in this year will be met by a re-appropriation of the grant passed for the Moody Bay Reclamation in the present Budget, and on this point early orders are requested."

25. On a strongly worded representation having been received by Government from the Harbour Board as to the delay in beginning the Lighthouses, the Government of India has written to again asking for an early disposal of the subject.

26. In the meanwhile a reply, as below, was received from the Secretary of State, in the Public Works Department, to the Marine despatch No. 28 (see paragraph 21 ante):—

No. 32, dated 30th November 1865.

"Your Excellency's Marine despatch No. 28 of 5th August last, on the subject of the lighting of Bombay Harbour, intimates that on receipt of the sanction of the Government of India to the construction of the proposed Lighthouse you intend to request that the lanterns may be made in England. I observe, however, that the Lighthouses in question include two to be built on Kennerly Island, the construction of both of which your Harbour Committee continue to recommend, notwithstanding that both Admiral Sullivan and Mr. Parkes, C.E., when referred to, gave it as their decided opinion that a single Lighthouse would be amply sufficient.

"2. Your Committee's reason for adhering to their original view is stated to be their desire to ensure 'more certain distinction from the Colaba Lighthouse and the Floating Light,' but I am desirous of being more particularly informed of their reasons for doubting the adequacy of the means for that purpose suggested by Admiral Sullivan."

27. A copy of this Despatch was sent to Captain Barker, Master Attendant and Conservator of the Port, who, in reply, addressed Government as follows:—

"I regret that so long a period should have elapsed from the receipt of your letter No. 54, dated 21st February 1866, No. 128 W. of dated Bombay Castle, 13th January, by some mistake the letter was mislaid. The copy of Despatch alluded to in the 2nd paragraph of your letter has not been received, or, at all events, cannot be found; I should feel obliged if you could furnish me with another copy.

"2. I am of opinion that there does not exist any need for a double light on Kennery; in fact, as will be shown hereafter, would be likely to prove injurious. A *single Lighthouse* would answer every purpose, provided it is made as distinct as possible by night as well as by day from the Lighthouse proposed to be erected on the end of the S. W. Prong.

"3. I would propose that an Iron Lighthouse Tower, 80 feet above the highest part, or near the centre, be erected on Kennery Island. This would give an elevation of 180 feet above the level of the sea. That this Tower be four-sided, and that it be painted in alternate red and white bands, each 10 feet wide from base to lantern platform.

"4. That the light displayed be a bright white light of the first class *fixed*. It would be seen in ordinary weather. This would not only be a guide on approaching the Port from the south, but from all directions.

"5. The objections to a double light on Kennery are, that the Island is so small that the light could not be placed sufficiently far apart to be always distinguished as 'double lights' if 1st class lights are used, and any others would be of little or no avail to prevent the frequent shipwrecks and disasters that have of late years occurred, for their rays would mingle and seem as one light until very close to them; this would be likely to lead to disaster. I would further propose that a round Lighthouse Tower be erected of *stone* on the end of the S. W. Prong, where it dries at ordinary low-water spring-tides; that the lantern platform be 150 feet above low-water mark; that it be painted *white* from base to summit.

"6. The light displayed therefrom should be a revolving light of the 1st class. (The present light I believe to be a 2nd class

ht). could be seen from a ship's deck in ordinary weather at 21 miles, and would be seen close in with the shore to the as far as its range extends: the present light is shut in Malabar Point, some 6 or 7 miles from the shore (*vide* chart accompanying the Harbour and Pilotage Board's letter regarding wreck of the *Jeddo*).

7. These two Lighthouses would be so perfectly distinct one from the other, both by night and day, that I cannot see it possible the one could at any time be mistaken for the

8. I would again refer to the chart. Every seaman, nay every landsman, must be aware of the great advantage of 'transit' bearings, that is directing the course of a vessel by having two well known objects in line with each other.

9. A ship making the Port from the southward would keep the Lighthouse on Kennery on the starboard or right hand, and long before she approaches that Island the outer Light Vessel and the Prong Lights will be seen. These being kept in 'transit' would lead her well clear of Kennery island and flat.

10. A vessel approaching the Port from the northward would keep the Prong Light on the port or left hand, and long before she approaches the Prongs the outer Light and Kennery Light would both be seen. These being kept in 'transit' would lead the vessel over the verge of the foul ground off the Prongs, therefore the seaman would keep the Kennery Light well clear to seaward of the outer Light.

11. The outer and inner Light Vessels are admirably placed as to distance from each other ( $4\frac{3}{4}$  miles); the Prongs and Thull Shoal, a direct course between the two Light Vessels, would carry a vessel just clear of the pitch of the S. E. Prong.

12. Many improvements have been made since these vessels were built, both as regards vessels and lighting apparatus during the S. W. monsoon. When her services are most required, the outer Light Vessel is almost useless at times from the heavy rolling of the vessel. The Lantern cannot be kept at its proper elevation, and even when lowered the lamps require constant trimming.

"I trust I may be pardoned for this long importance of the subject is the only excuse I have to offer."

28. Captain Barker's foregoing letter was sent to the P. W. D.—No. 6 of 15th March 1866. tary of State on the 15th March with the remark of this Government as Captain Barker now concurred with the views expressed by Admiral Sullivan as to the preference of a single fixed light over a double one, there seemed to be no reason why these proposals should not be at once sanctioned.

29. Further representations from the Harbour Board pointing out the serious losses of property from the continued want of proper lighting of the Harbour, led to the following letter to the Government of India on the 14th March 1866 :—

"In continuation of my letter No. <sup>1529 C. W.</sup>/<sub>2518</sub> of 11th December Nos. 60 and 80 of 1866, and 1865, I am directed by the Honourable the Governor in Council to forward the accompanying chart. copies of two further letters, as per margin, from the Harbour and Pilotage Board, urging upon the consideration of Government the speedy construction of the Lighthouses at Kennery and on the South-West Prongs.

"2. His Excellency the Governor in Council, I am to observe, fully concurs with the Harbour Board in their opinion as to the very great necessity of supplying adequate lighting arrangements to this Port, and I am to solicit the sanction of the Government of India to the proposal by the Board to erect at once, at the cost of the Port Fund, an Iron Lighthouse at Kennery, the work to be under the Board's direct supervision.

"3. The favour of the early reply of the Government of India to this letter is requested."

30. The replies of the Government of India to the several representations by Government are to be found below in extenso: they are dated respectively the 29th March and 27th April 1866 :—

"I am directed to acknowledge your letters Nos. <sup>1116 C. W.</sup>/<sub>2147</sub> and <sup>1529 C. W.</sup>/<sub>2518</sub>, dated respectively the 7th October and 11th December 1865,



urging immediate construction of Lighthouses on the S. W. Prongs, Kennery Island, and in reply to state, with reference to despatch from the Secretary of State to the Bombay Government No. 32 of 30th November last, that the Government of India defer according sanction to the project for the erection of Lighthouses until the decision of the Home Government, is in regard to the character of the Light to be exhibited on Kennery Island.

It is further to be marked that from the latest information not appear to be any immediate prospects of money available from the special fund."

"In reply to your letter No.  $\frac{202 \text{ C. W.}}{400}$ , dated the 14th March 1866, urging the speedy construction of the Lighthouses at Kennery and on the S. W. Prongs, Bombay, I am directed to refer you to Public Works' Department letter No. 334 of 29th idem, and to state that until the question of the character of the Light is decided on by the Home Government the Government of India is unable to accord sanction to the commencement of the work.

"2. The Rs. 50,000 set apart by the Harbour and Pilotage Board for the erection of the Lighthouses will, I am to remark, be of little use unless the Board can supply the rest of the money needed for this purpose. It would appear that the prosecution of the work, even after receipt of sanction from England, must depend on the state of the special fund as alluded to in the 2nd paragraph of the letter above referred to."

31. On receipt of the last letter from the Government of India, a telegram was sent to Earl de Grey, Secretary of State, asking "Is the Light on Kennery to be single or double, flashing or fixed?"

32. To this the following reply was received from the Secretary of State, dated 4th June 1866:—

"I have received your Excellency's telegram of 16th ultimo, inquiring whether the Light on Kennery Island in Bombay Harbour is to be single or double, flashing or fixed.

"2. This is a question for which a brief terse scarcely suffice.

"3. It has been finally determined that there shall be one Lighthouse, instead of two, on Kennery Island; but suggestion that the light should be fixed appears to have originated with Admiral Sullivan, who, however, recommended it on condition that the Colaba Light should be flashing, and the floating light revolving. An alternative proposal of Admiral Sullivan was that at Colaba there should be a one-minute revolving dioptric light, and on the Kennery Island a ten-second dioptric light. The decision, with respect to Kennery, would seem therefore to depend on what may be done at Colaba. Your despatch No. 6 of 15th March last, referred to in the telegram under reply, signifies your concurrence in Admiral Sullivan's preference of a single fixed light for Kennery Island, and it hence to be inferred that the Colaba Light is to be flashing, I also join in your conclusion."

And a copy of this Despatch was sent to the Harbour Board, P. W. D.—No. 1636 of 12th July 1866. with a request that they "will state which of the alternative plans they would recommend for adoption, and further, whether the Board are prepared with funds to undertake and complete the proposed light at Kennery."

No. 346 of 20th July 1866. 33. The Harbour Board replied as follows:—

"With reference to your letter No. <sup>CR 1 C. W.</sup><sub>1636 M.</sub> of 1866, dated the 12th instant, forwarding Despatch No. 9, dated 4th June last, from the Secretary of State for India, on the subject of lighting the Bombay Harbour, and requesting me to state which of the two alternative plans therein alluded to the Board would recommend for adoption, and whether they are prepared with funds to undertake and complete the proposed Light on Kennery, I have the honour, by desire of the Harbour and Pilotage Board, to state, in regard to the 1st inquiry, for the information of His Excellency the Governor in Council, that they concur in the views of Government, viz, that the *Kennery* should be a *bright white light of the*

1st class light on the end of the South-West Prong to  
a flashing 1st class light, and the outer Floating  
Ship to be a red fixed light.

2. As regards the 2nd question, the Board direct me to  
that they are prepared with funds to undertake and com-  
he proposed light on Kennery, provided the entire manage-  
of its design and erection is left to them. If Government  
action this arrangement at once, the Board will send instruc-  
to Captain Young, C.B., one of their late colleagues, by next  
bering out the light, which they trust will then be in posi-  
the next South-West monsoon."

P. W. D.—No. 1895 of 6th  
August 1866.

34. To the foregoing Government  
replied as below :—

Kennery—White light—1st  
Class Fixed. S. W. Prongs—  
Do.—10-Second—Flashings.  
Outer Light Ship—Red Light  
Fixed.

"I am directed by the Honourable the Governor in Council to  
acknowledge the receipt of your letter  
No. 346 of the 20th ultimo, conveying  
the Board's opinion on the description  
of lights (as recapitulated in the margin)  
to be used at Kennery and elsewhere

at the entrance of the harbour, and stating that the Board is pre-  
pared to undertake the immediate construction, at its sole cost, of  
the Lighthouse, &c. at Kennery.

"2. In reply I am desired to observe that Government concur  
in the Board's proposal to undertake the building at Kennery, but  
as regards the kind of lights to be used, I am to point out that the  
Secretary of State's Despatch No. 9, dated 4th June 1866, has  
allowed a *Fixed* light on Kennery only on the condition that  
the Colaba light should be *flashing*, and the outer floating light  
*revolving*.

"3. On this point I am desired to inquire of the Board whether  
they agree to Admiral Sullivan's proposal, or wish for a further  
reference to England."

35. Referring to the Government of India's letter No. 376 | C  
of 27th April last (see paragraph 30 ante), the Government of Bombay  
addressed a further letter to the Government of India on the 13th

P. W. D.—No. 1640 of 13th July 1866, pointing out that another  
wreck had occurred on the S. W. Prong

in June last, and that in the opinion of the naval mishap must be attributed to the imperfect manner in which the approaches to the Harbour are lighted and marked.

36. It should here be noted that in a recent correspondence between Government in the Marine Department and the Harbour Board (relative to the means at the disposal of the Board to be employed in the event of wrecks) the Board made the following observation on the 19th July 1866:—"The Board distinctly desire to place on record that they can in no way hold themselves responsible for these or any future wrecks that may occur from want of lights on the Island Kennery.

"Next in importance to the light on Kennery, the Board consider a new Lighthouse, with a 1st class light, should be erected near the end of the S. W. Prong at Colaba, as already recommended.

"The erection of these two lights would be a safeguard to shipping entering the Harbour, and tend largely to prevent wrecks."

37. The Government of India replied on the 27th July 1866 as follows to the last representation from this Government, No. 1640 (see paragraph 35 ante):—

"I am directed to acknowledge receipt of your letter No. <sup>588 C. W.</sup><sub>1640 M.</sub>, dated 13th July 1866, regarding the early commencement of work on the Lighthouse on the S. W. Prong, Bombay Harbour, and in reply to state that the Governor General in Council regrets that in the present state of the finances he is unable to sanction an extra grant for this work, but will be prepared to authorise any re-appropriation of funds from Civil Works which the Government of Bombay may desire to recommend in view to carry it out.

"2. I am to add that if the Government of Bombay is prepared to arrange for carrying on the work in the manner suggested, a plan and estimate should be at once submitted for sanction, the preparation of materials being meanwhile proceeded with."

38. The Harbour Board in the meanwhile, in reference to G. L. No. 1895, of 6th August 1866, No. 394 of 10th August 1866, replied as below on the 10th idem:—

"With reference to your letter No. <sup>790 C. W.</sup><sub>1895</sub> of 1866, dated 6th instant, I have the honour, by direction of the Harbour and Pilotage

Board, for the information of His Excellency the Governor  
 that although the Board are of opinion that the outer  
 Light should show red when the light on Kennery Island  
 is exhibited, so as to make a marked distinction between the outer  
 Light and the Colaba or Prongs' light, the Board will  
 to their opinion on this point, and agree with Admiral Sullivan,  
 rather than delay the erection of the light on Kennery, so much  
 importance do they attach to its speedy completion.

"I am instructed by the Board to ask the sanction of His Excel-  
 lency the Council to their at once taking this work in hand without  
 reference to England."

The Government thereupon authorised the commencement of  
 the Lighthouse at Kennery in the  
 P. W. D.—No. 1992 of 16th August 1866. following letter, dated 16th August 1866,  
 addressed to the Harbour Board:—

"I am directed to acknowledge the receipt of your letter  
 No. 394, dated 10th instant, stating that sooner than delay the erec-  
 tion of the Light on Kennery, the Harbour Board will forego their  
 own opinion, and agree to the arrangement of Lights recommended  
 by Admiral Sullivan. In reply I am to inform you that on these  
 conditions the Light on Kennery may at once be proceeded with."

and forwarded a copy of the correspondence, ending with the  
 foregoing letter to the Harbour Board  
 P. W. D.—Despatch No. 27 of 16th August 1866. to the Secretary of State for India, on  
 the same day.

**SELECTIONS FROM THE RECORDS OF THE  
GOVERNMENT.**

**BOMBAY**

**No. C.—NEW SERIES.**

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**P A P E R S**

**RELATING TO**

**PILOTAGE SYSTEM OF BOMBAY**



**Bombay:**

**PRINTED FOR GOVERNMENT**

**AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.**

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**1866.**



# PILOTAGE SYSTEM OF BOMBAY.

No. 137 of 1866.

MARINE DEPARTMENT

*Bombay, 16th April.*

From the SECRETARY to the HARBOUR  
and PILOTAGE BOARD, Bombay,

To the SECRETARY to GOVERNMENT.

SIR,—I have the honour to request that you will lay before His Excellency the Governor in Council the following Memorandum and Resolution of the Harbour and Pilotage Board, relative to the improvement and reconstruction of the Pilotage system of this port.

2. As it is desirable that no time should be lost in remedying the defects in the existing Pilotage system at present complained of, the Harbour and Pilotage Board would respectfully request an early consideration of the subject on the part of Government.

I have the honour to be, &c.

HENRY MORLAND, Lieut. late I. N.,  
Secretary to the Harbour and Pilotage Board.

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## MEMORANDUM BY THE HARBOUR AND PILOTAGE BOARD.

1. The Pilotage system of Bombay, as at present constituted, has long been a source of dissatisfaction and complaint on the part of shipmasters and others connected with the shipping interest, owing to the defective manner in which the services charged for under the Act No. XXII. of 1855 are rendered to vessels arriving at and leaving this port, more especially in the Monsoon season.



2. *Inefficiency* complained of appears to arise not from want of skill or ability on the part of the Pilots, but rather from the system under which the Pilotage duties of the Port have hitherto been conducted.

3. The present system may be described as follows:—

The Pilots are appointed to do duty after a year or sometimes after a longer period of probation, and thenceforward rise by seniority through the different grades into which they are divided, and draw the wages of their grade quite independently of the duty performed, or of their efficiency in their calling. They are in fact the servants of the Harbour and Pilotage Board on a monthly salary. A certain number of open boats are provided in which the Pilots put off to meet ships signalled at the Light House as entering the port, and in which they return to the shore from outward bound ships which they have piloted out to sea. All expenses of boats, &c. are paid by the Board, and the Board receives all the fees levied for pilotage under the Act. The superintendence of the Pilots is exercised by the Master Attendant.

4. The disadvantages of such a system are manifest. In the first place, as the Pilots receive a monthly salary which is not dependent for amount on the duties performed, there is no incentive to exertion, and the consequence is that the duties are apt to be gone through in a perfunctory manner, and difficulties are regarded as insurmountable which would be comparatively easily overcome were the earnings of the Pilots dependent on their exertions. As an illustration of this the Board would notice the very frequent complaint on the part of shipmasters that they are not boarded by a Pilot till after the greater part of the dangers of entering the Port is passed, and though this is no doubt partly owing to the Pilots having to start from the shore after the ship is signalled, still there can be little doubt that if their pay depended on it they would find a way of boarding vessels earlier. Again, the practice of waiting till a vessel is signalled from the Light House at Colaba before putting off from the Pilot Bunder to board a ship is also conducive to ships not being boarded at the proper time, as, on the one hand, hazy weather may prevent a ves-

sel's being seen from the Light House till very close on the other hand an adverse wind or tide, or both combined, prevent the Pilot from boarding a ship until his services are pretty nearly superfluous. This last remark applies especially to boarding vessels in the monsoon. Further, the Pilot Boats used, although very able and very serviceable in ordinary weather, are not suited for remaining outside the port in the stormy weather of the monsoon and when they do so, it is often at great risk to those on board. So much is this the case that the Board has found it necessary to maintain a vessel during the monsoon to assist in case of accident to the Pilot Boats, and to lead vessels in when the weather permit of the Pilot Boats putting off.

5. The disadvantages of the present system, some of which have been noticed above, seemed so apparent to the Board that they came to the conclusion that something must be done to remedy them, and as a first step to this, they procured all the necessary information regarding the system and rules of Pilotage in many of the other great ports, such as Liverpool, Glasgow, Hamburg, Calcutta, &c.

6. The result of the Board's investigation went to prove that in no other port but Bombay were the Pilots paid without reference to the duties performed, and also that in all the other ports from which information was furnished, the practice was to board vessels outside the dangers of the port by means of pilotage vessels large enough to keep the sea, cruising outside the entrance to the port, with a supply of Pilots on board which were drafted off to the vessels making the harbour as required.

7. Taking the above two very important differences from the present Bombay system as the groundwork for reform, the Board after very mature consideration came to a decision as to the general outline of a plan for the re-organizing of the present system of Pilotage, taking as their guide the practice followed in the great ports of Europe, with such modifications as were demanded by the difference of climate and other circumstances at this place.

8. The Board then delegated to a Sub-Committee of their number the task of drawing up a scheme in detail, and the scheme

of the S. Committee as approved and adopted by the Board is  
 spect. Committed herewith for the approval of His Excellency  
 Governor in Council.

9. The plan is divided into two parts—*first*, a system of re-  
 ceptions, for the practical working of the Pilotage department;  
*second*, the arrangement proposed for the financial working  
 of new organization.

10. The Board in conclusion would beg to state that the  
 proposed has the concurrence of all the members, with the  
 exception of Captain W. C. Barker, the Master Attendant,  
 who is the present arrangement with some slight alterations.  
 The Board are sensible of the great weight which must necessarily  
 attach to the opinion of an officer of Captain Barker's experience,  
 and they regret that he does not concur with his colleagues as to  
 the changes which are required. Captain Barker at the request  
 of the Board has furnished a sketch of the Pilotage system which  
 he considers best adapted for the wants of the Port, and this sketch  
 the Board beg to forward also herewith for the further information  
 of His Excellency the Governor in Council.

11. The scheme recommended by the Board is also that  
 approved of in its main features by Captain Young, C.B., their  
 late Vice-President: it will be for Government to decide whether  
 the reform proposed is desirable or not.

A. F. BELLASIS,

President of the H. & P. Board, and Commr. of Customs,

G. F. HENRY,

Vice-President of the H. & P. Board,

A. C. GUMPERT,

Member of the H. & P. Board,

ANDREW GRANT,

Member of the H. & P. Board, and Agent to Lloyds.

## REPORT BY THE SUB-COMMITTEE

### *Rules for the Working of the Pilotage Department.*

1. The Bombay Pilots to be a Licensed Service. To be paid by shares in proportion to their standing, and the they do.

2. Licenses to be granted by the Harbour and Pilotage Board, which must be renewed on the 1st of every January payment of Rs. 30 as a Fee.

3. The Pilot Service for the present to consist of Pilots, and three Probationers, which number may be at the discretion of the Harbour and Pilotage Board, as the number of the Port increases or as circumstances may require.

4. The Harbour and Pilotage Board to provide three Pilot Schooners of 100 tons each, similar to the Liverpool Pilot Schooners, with such alterations as may be thought necessary to allow increased ventilation for the difference in climate.

5. The crew of each Schooner shall consist of a Master, who shall be a Senior Pilot, but not on the running list. He must man his Vessel (with not less than 1 Serang and 14 Lascars), and keep her in good working order. She will have attached to her six Pilots and one Probationer.

6. No. 1 Pilot Schooner shall cruise between the Outer Floating Light Ship bearing S. E. 2 miles, and the Island of Kundaree bearing S. E. 5 miles.

The Master must always use his utmost endeavours to intercept, and supply with Pilots all inward bound ships.

He will receive on board his vessel the Pilots from all outward bound ships.

He will remain on his station for seven days, leaving it only when all his Pilots are away, or when he may have received on board three more than his complement. He may then stand in, and No. 2 is at once to take his place.

7. No. 2 shall cruise between the Outer and Inner Light Ships.

He shall supply all vessels that have not been served by No. 1. When No. 1 has been seven days at the Outer Station, she (No. 2) shall go out to relieve her or previously should No. 1 stand in.

3. No. 3 will be the spare Vessel in Harbour ready to take place whenever she relieves No. 1.

4. Should any of the Schooners require repair, the other two shall work the Stations, till such time as the third is ready, taking that the Outer Station is never left without a pilot.

5. A good six-oared cutter to be stationed at the Dockyard, shall go off to each ship on anchoring to land her Pilot, and attend to take Pilots to outward bound ships.

11. The Masters of the Schooners shall keep a journal, which they shall bring for inspection to the Master Attendant's Office within twelve hours of the termination of each cruise.

12. The Schooners when they proceed to their stations must have four of their Pilots on board.

13. The Pilots not afloat to attend every morning at the Master Attendant's Office, at 10 o'clock, for orders.

14. Pilots of inward boundships to report to Master Attendant's Office, at once on landing, if it is within office hours, if not, at 10 o'clock the following morning.

15. When the Pilots are on board of the Schooners, they are under the authority of the Master, and they must pay strict attention to any lawful order he may give, whether as to taking their turn at working the Schooner, at which they must assist, or as to boarding vessels.

16. Pilots shall conform to all the orders of the Master Attendant or whoever may be placed in authority over them.

17. Pilots shall not hold any interest on shore in Steam Tugs. They are not allowed to keep a Tavern or Lodging-house, or in any way to retail wines or spirits.

18. Pilots are liable to fine, reduction in grade, or suspension of license by Harbour and Pilotage Board, for refusing or neglecting

to take charge of inward bound ships or for any negligent fault or misconduct.

19. No Pilot shall claim salvage without the consent Harbour and Pilotage Board.

20. The earnings of each Schooner to be divided and on the 1st of every month, or as soon after as she comes in her cruise.

21. When the Schooner at the Outer Station fails to supply an inward bound ship with a Pilot, and such inward bound ship gets supplied from No. 2 Schooner, then the Pilots shall receive (for division into shares) one-third of the sum which they have been entitled to had such vessel been piloted in from sea.

When No. 2 Schooner fails to supply an inward bound ship with a Pilot, none of the pilotage money shall be given to the Pilots.

Should either Schooner be within moderate distance of the inward bound ship and offer a Pilot, then they shall receive the same share as they would have received had they put a Pilot on board.

#### *Examination of Pilots.*

1. The Harbour and Pilotage Board shall appoint as Examiners of Pilots—

The Master Attendant,  
One Master of Schooner,  
One Running Pilot,  
Lloyd's Marine Surveyor.

2. Applicants for admission to the Pilot Service must be 21 years of age, and of good health. They must hold a Board of Trade Certificate of not a lower grade than "only Mate," and they must produce certificates of strict sobriety and good conduct.

They will then be eligible for an appointment as a Probationer.

3. The Master Attendant to have the appointment of Probationers.

twelve months as a Probationer they may go before the Examining Committee, and if they pass, the Board will grant a License as a 3rd Class Pilot on the first vacancy.

3. Their subsequent steps to 2nd and 1st Class Pilot always given by seniority, according to vacancies.

*Shore Establishment.*

v. The First Assistant Master Attendant will appoint Pilots to outward bound ships, and he will be the Master Attendant's principal assistant in every thing relating to the Pilot Office duties on shore, including the care and inspection of life-boats, stores, buildings and property on shore belonging to the Harbour and Pilotage Board.

2. The Second Assistant Master Attendant shall be called the Harbour Master. His duties shall be to direct where the ships are to be berthed. He will have the charge of all Buoys and Beacons in the Harbour. In the event of fire or other accident he will attend with all the Pilots not on duty in the Schooners to render what assistance may be required, and he will be the Master Attendant's principal assistant in every thing connected with the Harbour. He will inspect quarterly and report on the state of the Pilot Schooners, also the Floating Light Ships, and under the Master Attendant shall have charge of the general conservancy of the Harbour.

*Proposed arrangement for the financial working of the Pilotage Department.*

The actual receipts on account of the Pilotage Department for the last five years appear to have been—

For year 1860-61	Rs. 1,41,990	12	0
1861-62	„ 1,26,784	6	0
1862-63	„ 1,25,396	8	0
1863-64	„ 1,39,056	12	0
1864-65	„ 1,55,006	14	0

The close of the American war may have an effect in reducing for a time the amount of receipts, but the extension of the railways,

and the natural increase of the trade of the port to keep the income fully up to that of last year. In estimating probable receipts on account of the Pilotage Department for the purpose of finding a basis for the financial part of the new scheme, I if we take Rs. 1,40,000 as the income, we shall not be placing amount too high. The present expenses of the department roughly may be called Rs. 1,00,000 per annum. Taking the estimated income as above, this shows a clear surplus of Rs. 40,000 per annum.

In November 1864 there was transferred to the Harbours Pilotage Board accumulated balances for the Pilotage for amounting to Rs. 98,000, to which falls to be added this past year's surplus say Rs. 50,000, making a sum in hand on account of the department of Rs. 1,48,000.

It is proposed to build in England three Pilot Schooners, the cost of which laid down in Bombay may be taken at Rs. 45,000 each, complete with boats, &c., making a total Rs. 1,35,000; this sum will be provided out of the above accumulated surplus of Rs. 1,48,000.

These Schooners will be handed over complete to the Companies of Pilots, and thereafter will be maintained and kept in repair by them.

In order to repay the Board the money laid out on those vessels, and to secure to it a fair share of the income arising from the Pilot Service, it is proposed that the receipts on account of Pilotage should be divided into shares, and that the Schooners, or the Board for the Schooners, should have a certain number of these shares credited to them.

If the Pilotage receipts were divided into 64 shares, the income would amount to nearly Rs. 2,200 per share. Of this, fifteen shares or Rs. 33,000 should go to the Schooners, and five shares or Rs. 11,000 to the Pension Fund to pay pensions and allowances now running, or to be incurred; the remaining 44 shares, or Rs. 96,800, will go to the Pilots for salary and expenses of maintaining the Schooners. Say the expenses for each Schooner are Rs. 1,200 per month for



crew, provisions, webres, repairs, &c. exclusive of Pilots' remuneration, which is a very full estimate, the expenses of the three Schooners would be Rs. 43,200 per annum; there would thus be left for provision among the Pilots a sum of Rs. 53,600 per annum.

The present number of Pilots is 16, and this number might be increased, including the three Senior Pilots, who are to command the Schooners.

3 Senior Pilots, Masters of Schooners and General Superintendents of their Companies.

4 First Class Pilots.

6 Second Class Pilots.

3 Third Class Pilots.

16

Three Probationers would also be employed in addition to the above.

The portion of the receipts applicable to Pilots' salaries is Rupees 53,600; this would admit of the following salaries:—

3 Senior Pilots, Rs. 400 per mensem	Rs. 14,400 per annum.
4 1st Class „ „ 300 „ „	14,400 „ „
6 2nd „ „ „ 250 „ „	18,000 „ „
3 3rd „ „ „ 200 „ „	7,200 „ „
16	Rs. 54,000

Or a few hundred rupees in excess of the amount stated.

The allowance to Probationary Pilots will fall to be paid by the Harbour and Pilotage Board.

The above allowance for Pilots includes every thing, and no extra payment, such as that for house-rent, would be allowed under the new arrangement.

With regard to pensions, the running of time for pensions would stop when the new system commenced, and when a Pilot who has now served so many years towards a pension retires hereafter from the service, he will be paid a pension by the Board in proportion to the service he can show under the present régime;

or, if he prefers it, he may cancel his claim for p as compensation a present money payment from the money payment, if accepted in a number of cases, might be bo ed in the meantime from the Port Fund and repaid gradually. sum of Rs. 11,000 per annum which the five shares of the re reserved for pensions would yield would thus gradually be re of claims, and come to form an ordinary receipt.

The expense of a Harbour Master will fall on the Port and from the money received from the Pilotage proceeds c the Port Fund, if that does not prove sufficient, will be paid salary of the three Probationer Pilots, cost of Cu harbour, and cost of establishment for Pilotage purposes in Master Attendant's Office.

A system of fines for any dereliction of duty will have to instituted, and the Pilots must be kept up to their work by deductions being made from their earnings when their duty is not properly performed. Those fines will go to form a subscription by the Board to a Sick and Pension Fund, to which the different Pilot Companies ought to subscribe under the new system. As no pensions for service under the new order of things will be paid by the Board, it is desirable that a Sick and Pension Fund should be created in order to prevent worn-out and inefficient men from remaining on the active roll.

The fees received for the license of the Pilots, annually, might also be devoted to the Sick and Pension Fund.

In spite of any regulation to the contrary, it is quite certain that in Bombay, as in any other port, the Pilots will get gratuities from Captains of vessels, but it is the duty of the Board to prevent any Captain of a ship who does not choose to pay a gratuity from suffering on that account, and to do this it is most desirable that the berthing officer should be quite distinct from the Pilots, and free from their influence.

No. 352 of 1865.

*Office of the Master Attendant and Conservator of the Port,  
Bombay, 1st December 1865.*

## MEMORANDUM.

Forwarded for the consideration of the Harbour and Pilotage Board, with the compliments of the Master Attendant and Conservator of the Port.

(Signed) W. C. BARKER, Retired Captain, I. N.,  
Master Attendant and Conservator of the Port.

*Proposed Establishment.*

- Six Pilot Boats.
- One Conservator's Boat.
- One Cutter of six oars.
- One Gig of six oars.
- Two Jolly Boats, of four oars each.

One of the latter, for the Pilot Bunder, Colaba, and one for the Dockyard, to convey to and from their respective Boats the Pilots and Boats crews; frequently the Pilot Boats cannot approach the Landing places.

No crew will be required for either of these Boats.


Three spare Pilot Boats will be kept ready in every respect for launching at short notice in case of accident or disaster, two at Colaba and one in the Dockyard.

One Syrang to superintend all and see that the Boats are kept in good order, and to preserve order and cleanliness in the Banks Hall. ....	Rs. 35
One Signal Tindal to look out during the day and report all signals made, and every occurrence that takes place in the Harbour .....	„ 25
3 Native Cooks or Bundaries, at Rs. 12 each ....	„ 36

Carried forward . . . Rs. 96

Brought over  Rs.

2	Bheesties or Watermen, at Rs. 9 each	....	„
6	Boat Tindals,	„ „ 25	„ .... „
72	Lascars of Pilot Boat,	„ „ 17	„ .... „
1	Tindal, Conservator's Boat	.....	„
12	Lascars do. at Rs. 17 each	.....	„
1	Tindal, Cutter Harbour duty	.....	„
5	Lascars, at Rs. 15 each	.....	„
1	Gig Tindal	.....	„
5	Lascars, at Rs. 15 each	.....	„
2	Sweepers, at Rs. 3 each	.....	„

Total ...Rs. 1,901 

With provisions according to scale granted to Lascars of Bombay Marine.

*For South-West Monsoon only,*

viz. from 1st June to 30th September.

One Brigantine of 180 Tons.—A fore and aft Schooner will not answer; it is indispensably necessary for this duty that the vessel should have square sails on the foremast to run in before the heavy breaking sea that generally prevails at the entrance of the Harbour at this season, particularly when blowing hard and tide running ebb; instances have occurred of the old Pilot Brigs of 108 tons and upwards having been “pooped” and on several occasions nearly swamped.

The Vessel should be supplied with one good Life-Boat and one 6-oared self-righting Boat. The davits to be fitted to swing in board.

I would propose that this vessel should be manned as follows:-

First Officer	not in charge to receive three Rupees	
1	Diem in addition to pay and house rent . .	Rs. 90
3	Probationary or Third Class Pilots to receive one	
	and a half Rupees each per diem in addition to	
3	pay and house rent . . . . .	„ 90
1	Writer to keep accounts, and issue Stores and	
1	Provisions . . . . .	„ 40
1	Syrang . . . . .	„ 36
1	Tindals, each Rs. 25 . . . . .	„ 50
1	First Class Lascars, at Rs. 17 each . . . . .	„ 204
1	Second Class do. „ „ 15 „ . . . . .	„ 180
1	Third Class do. „ „ 13 „ . . . . .	„ 156
1	Topass . . . . .	„ 10
1	Bunday or Cook for Lascars . . . . .	„ 12
1	Officer's Servant . . . . .	„ 15
1	Officer's Cook . . . . .	„ 15
		<hr/>
		Total . . . . Rs. 898

To be allowed provisions on same scale as issued to crews of vessels of Bombay Marine.

This may appear a large crew, but it must be borne in mind that frequently both Boats may be away at the same time with a smaller crew, in such cases sufficient men would not be left on board to work the vessel.

Towards the close of the monsoon, that is about the 20th September, the vessel to be recalled, dismantled, and laid up at Mazagon or other convenient place. The Master Attendant may select her spars, sails, stores, running rigging, &c. &c., all to be carefully tallied or marked and secured as may be found most convenient either on board or in godowns on shore. The crew to be discharged on 30th September, and a Harbour crew appointed as follows :—

1	Tindal . . . . .	Rs. 25
6	Lascars, at Rs. 15 each . . . . .	„ 90

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Total . . . . Rs. 115

To receive provisions in addition.

These are necessary to keep the vessel clean and in order from time to time to dry the sails, &c. &c.

### *Office Establishment.*

1 Master Attendant and Conservator of the Port, Registrar of Shipping, &c.

First Assistant or Deputy Master Attendant and Conservator of the Port and Deputy Registrar of Shipping.—The first Assistant's duties will be (under the Master Attendant and Conservator of the Port) principally confined to the office. To examine, compare all Indents, Survey Reports, Pay Abstracts, &c. &c. attend to entry of ships, examine ship Registers, endorse on back thereof (when necessary) change of Masters, examine the calculation of all ships measured, whether square rigged or native craft, for the granting of Registers and Cowls. To see that the several records of the office and all documents connected therewith are duly kept up, and as all applications for Pilots, whether to take vessels to sea, docking and undocking, transporting, &c., are sent to the Office, to appoint Pilots for the aforesaid duties.

Second Assistant Master Attendant and Conservator of the Port.—To be also Surveyor of the Port and Harbour Master. This officer's duties will be principally afloat, to see the berthing of vessels, that the vessel keep clear house, that none of the Regulations of the Port are infringed, such as boiling pitch on board or in too close proximity to their vessels, that Boats be not allowed to hang on stern to the detriment of the free navigation of the Port, and to keep free and clear passages through the shipping for all vessels entering or quitting the Port, &c. To see to the examination and that they are kept in serviceable condition all moorings and danger Buoys throughout the Harbour. To examine and inspect at least once in every three months the Outer and Inner Light Vessels and Dolphin Light, as to the state and condition of the Lanterns, Lamps, &c. &c., and with regard to the two former to heave up and examine their moorings. When these inspections have been made, the same to be duly entered in a Book kept for that purpose, with full particulars of such

section submitted to the Master Attendant. To superintend  
 Docking, undocking and transporting of Vessels, and as Surveyor  
 of Port, the measuring of all Vessels requiring new Register,  
 for square rigged or native craft. To be prompt in rendering  
 assistance in case of accidents or disaster, such as fire, ships ground-  
 ing, fouling each other, &c. &c.

By Third Assistant Master Attendant and Conservator of the  
 Port Deputy Harbour Master.—To assist the Harbour Master in  
 the above named multifarious duties.

The services of both Second and Third Assistants will, how-  
 ever, frequently be required on shore for the survey of stores, &c. &c.

The following is the Establishment and scale of pay of the  
 Clerks of the Master Attendant and Conservator of the Port's De-  
 partment, as per Harbour and Pilotage Board's Resolution No. 104,  
 dated 12th April 1865:—

* I would recommend to the favourable con- sideration of the Board that the Head Clerk's pay be increased to Rs. 150 per mensem.	Head Clerk*	Rs. 115 per month.
	2nd do.....	65 „
	3rd do.....	50 „
	4th do.....	40 „
	5th do.....	40 „
	6th do.....	35 „
	Shroff .....	40 „
Harbour and Pilotage Board's Resolution No. 159, dated 30th May 1865.	1 Naique.....	12 „
	1 Peon .....	10 „
Vide Harbour and Pi- lotage Board's Resolu- tion No. 18, dated 16th January 1865.	1 Sweeper .....	2 „
	1 Waterman .....	1 „

Total . . . Rs. 410

Great difficulty is experienced at present for want of a "Compil-  
 ing Clerk" when necessary to refer for any former correspondence,  
 with the present Establishment. No particular Clerk can be spared  
 for the duty of preparing the Indices of the several Books of Cor-  
 respondence, Files, &c. &c. I would therefore recommend in addi-

tion to the above a Compiling Clerk on a *sa* menssem.

### *Pilots.*

The maximum number of Pilots at present allowed entertained is sixteen ; four more I think necessary so as to a total of 20, not including the officer in charge of the Light Vessel or Mate.

I would again urge on the Board the reconsideration pay of the Pilots, which I consider is very inadequate for this valuable and useful class of Public Servants.

Their pay at present is scarcely sufficient to support it is utterly impossible to make any provision for the future.

Candidates for the situations of Pilot should produce satisfactory testimonials as to character and ability, as to their sobriety and good conduct, and be good practical seamen.

Prior to being entertained they should undergo examination by the Marine Surgeon, as to their fitness physically.

The Master Attendant should have the appointment of all Pilots, who should undergo a probation of one year, six months with Outward Pilots, docking, transporting, &c., and six months with Inward Pilots.

At the end of this period to be examined as to their qualification for the situation of Pilot by a Committee composed as follows :—

1st Assistant (or Deputy) Master Attendant,  
2nd or 3rd Assistant,  
One 1st Class Pilot.

Their proceedings and report to be submitted to the Master Attendant, who being satisfied therewith, will furnish him with a License as 3rd Class Pilot, subject to approval and sanction of Harbour and Pilotage Board.

In the event of not being found competent for the situation of 3rd Class Pilot at the expiration of one year, to be given one month's notice and then discharged.



The following may be classed as follows :-

- } One Senior Pilot.
- (6) Six First Class Pilots.
- (6) Six Second do.
- (7) Seven Third do.

20 Total.

By to not consider that the present system of working the Pilotage may be improved upon, namely, that of having a certain vessel off for taking ships to sea, docking, transporting, &c., and in number stationed at Colaba for the purpose of assisting Pilots to in-bound vessels.

The Colaba Pilots are relieved yearly on the 1st January, two months notice being given to make the necessary arrangements with regard to house accommodation.

The system of substituting Schooners for Pilot Boats has been tried and failed, one Schooner or Brigantine rather (for reasons before shown) I think necessary to cruise off the Port during the South-West Monsoon, not only to guide vessels in, but to be ready in case of disaster, such as loss of masts or swamping of the Pilot Boats.

It will be necessary to retain this vessel for duty during the South-West Monsoon, even after the Light Houses on the Prong and Kenery are established for reasons stated above.

#### *Anchor Hoj.*

The want of such a vessel is often productive of inconvenience and frequently of serious loss. It is true there is some such description of vessel attached to the Marine Department, but she is old, unwieldy, and fitted up very roughly; such as she is, however, she is not always obtainable; and when so, unless the charges have been reduced very lately, the hire for her per diem I consider very high.

The Establishment of the "Palinurus" is one Diver in charge

26th May 1865. Rs. 30 per mensem (at present there is none),  
he having been drowned some months since

while diving for "Shannon's" moorings) ; two [redacted] on Rs. 11 each per mensem and  $\frac{3}{4}$  rations.

Say one Syrang .....	30 Rupees.
Two Lascars, Rs. 11 each ..	22 ,,
Provisions for 3 Natives, say Rs. 5 each per mensem .....	15 ,,
Total . . . . Rs.	67

Wear and tear of hull and rigging *nil*--the vessel is and fro by steamer or Pilot boats.

The Master Attendant has a large square lantern; and a pair of plate glasses being 1 foot 9 inches by 1 foot 7 inches.

In the centre four common copper oil lamps without reflectors.

On the occasions of either of the Light Vessels requiring repairs the "Palinurus" has hitherto taken the place of the "Shannon" or Inner Light, a portion of the crew of the Light Vessel under repairs being attached to her to hoist up the lantern and lamps, &c, the remainder attending to their vessel in Dock, cleaning out the hold, refitting, rigging, &c.

When the Light Vessels last received a thorough repair in Her Majesty's Dockyard, the "Palinurus" took up the station of the Inner Light Vessel from 30th January to 26th May 1860, and a charge was made by the Dock Master for the full period, viz., 118 days at Rs. 30 per diem, making a total of Rs. 3,540, a most enormous charge!! I remonstrated, but in vain. If the vessel was sold by public auction, I doubt very much whether she would realise even a moiety of the above. I would observe further that this charge of Rs. 30 per diem is still made by the Dock Master every time the "Palinurus" is engaged, and she is the only vessel we can engage for lifting heavy moorings, raising sunken Boats or Pattamars, &c.

This of itself shows the advisability, nay, the urgent necessity, of having a suitable Anchor Hoy attached to the Department. It

is possible. Stock may be available about the end of February, before which I propose fitting the Lantern to the Powder Hoy, a large for which vessel will be less than that of the Anchor by one-half; but even this I consider a very heavy charge, for instances are all the Vessels would otherwise be laying idle in the Basin. While on this subject I may allude to the case of the "Hoy of Manchester," which vessel entering the Harbour on the 27th of the 27th November grounded on the South-West Prong; when it was near low water and there was but little wind or tide. Mr. Corke at once proceeded out, and by laying out the fore and backing the sails, as the land wind set in, the tide rose was hauled off, I trust, not much injured.

But supposing there had been but a moderate breeze and sea, a kedge anchor would not have been sufficient for the purpose; a landy Anchor Hoy, with powerful windlass and capstan, (and one capable of being taken quickly to the spot,) would on a future case prove invaluable.

Instances are by no means rare of vessels losing overboard heavy cases. The Anchor Hoy would in such circumstances proceed instantly to the spot, and the article would be recovered.

Of course a charge would be levied for this service, which would tend in a great measure, if not altogether, to defray the expenses of maintaining such a vessel.

Again, frequent applications are made from Masters of merchant vessels for a vessel to convey heavy weights, such as steam machinery, &c. &c., to or from the shore; the vessel might on such occasions be lent, and a moderate charge levied for her services.

I would suggest a vessel of about 80 tons burthen, copper fastened and coppered, of strong build, no projections except the cat heads (they cannot be dispensed with) which should be very strong with three sheaves of large diameter.

No bowsprit or main boom, two masts fore and aft, main-sail and fore-sail and fore-stay-sail, so that unlike the present Anchor Hoy she could be moved about from place to place as required without having to resort to the aid of steam.

I have called upon the Master Builder to furnish with a plan and estimate of the probable cost of building such a vessel. She should be about 60 or 65 feet long, her beam one-third length, and not to draw more than (6) six feet water with stores, &c., on board. When estimate is received the same to be laid before the Board. She would require a lower deck and aft (with hatches at convenient places) the forepart of which should be for the accommodation of the crew, the remainder stowing away hawsers, tackles, &c.

The vessel should have a powerful windlass in the fore and a strong built patent capstan in afterpart; she could be made available for undocking ships by being secured to the strongest moorings; a moderate charge being levied from each vessel making use of the "Hoy."

One square sterned 4-oared Jolly Boat would be required for running out lines, &c.

Crew to consist of—

One Syrang and Diver .....	Rs.	35
Four Lascars, each Rs. 15 .....	„	60
With provisions $\frac{1}{2}$ as issued to Dockyard		
Lascars, say 5 Rs. $\times$ 5 .....	„	25
Total....Rs.		<u>120</u>

A better description of Lantern than that used by "Palinurus" when at the Rock Station could be made in the Factory to be fitted to the main-mast, and only attached thereto when her services are required as a Light Vessel. This can easily be arranged by having the frame work of the Lantern in two segments, 3 Lamps with reflectors on each side.

W. C. BARKER, Retired Captain, I. N.,

Master Attendant and Conservator of the Port.

*Extract. Paragraphs 14 to 18 from Master Attendant's letter to the Commissioner of Customs, No. 187, dated 10th Sept. 1860.*

Paragraphs 14 to 18.—The Inner Light Vessel “Shannon” Outer Light Vessel “Colaba” requiring extensive repairs, the Anchor Hoy was engaged for the duties of the Inner Light Vessel and both vessels were repaired, which repairs were executed in Dockyard, and extended over the period named in the Bill, viz. 118 days.

I would particularly draw your attention to the fact that during the whole period that the Anchor Hoy “Palinurus” was at the Dock Station, the Syrang was never on board of her, except during the time he was engaged as Diver, duly charged for in Bill No. 21 at the enormous rate of Rs. 15 per diem, he the Diver at the same time receiving a salary of Rs. 30 per mensem from Government. I would observe that although the Diver is borne on the books as Syrang of the Anchor Hoy, it is merely for the purpose of attaching him to some definite appointment that the salary might be duly charged for.

It will appear therefore that the actual expense incurred by the Dock Master's Department for the Anchor Hoy “Palinurus,” merely for the pay of two Lascars, the charge would be Rs. 22 per mensem, which for 118 days would amount to Rs. 85-13-10. The charge in the Bill is Rs. 3,540, rather a large margin for wear and tear, if such is meant.

I would again repeat that it is much to be regretted that the Warp Boats and Anchor Hoy should be retained in Dock Master's Establishment.

W. C. BARKER, Retired Captain, I. N.,  
Master Attendant and Conservator of the Port.

*Bombay Harbour, Pilotage.*

No. 285.

MARINE DEPARTMENT.

*Bombay Castle, 27th April 1866.*

Letter from the Secretary, Harbour and Pilotage Board  
137, dated 16th April 1866.

Submits a Memorandum and Resolution by the Harbour and Pilotage Board, respecting the improvement and reconstruction of the Pilotage system of the Bombay Harbour, and requests early consideration of the subject. Submits also a scheme by Captain Barker, who dissents from the proposals of the Board.

RESOLUTION.—A copy should be sent to the Chamber of Commerce, with a request that they will favour Government with an early expression of the opinion of the Chamber on the proposed alterations in the Pilotage system.

Copy should also be sent to Captain Giles, for the favour of his opinion and report on the proposals.

J. MACDONALD, Major,  
Acting Secretary to Government.

TO THE HARBOUR AND PILOTAGE BOARD.

No. 281 of 1866.

*Harbour and Pilotage Board,  
Bombay, 22nd June 1866.*

( TO THE SECRETARY TO GOVERNMENT,

MARINE DEPARTMENT.

SIR,— Adverting to my letter, No. 137, of the 16th of April 1866, and Government Resolution No. 205, dated 27th April 1866, on, I am directed by the Harbour and Pilotage Board to for the consideration of His Excellency in Council, the accompanying statement from the Master Attendant, showing the number of vessels boarded by Pilots as they entered the Harbour, &c., for the week ending the 16th of June 1866, and in doing so to state that the Board do not attribute blame to any person connected with the Department, but that they consider, with the present Pilotage system, it is impossible to expect better results, especially at this season of the year when the setting in of the monsoon renders it impossible for the present Pilot Boats to work sufficiently to windward to enable the Pilots to board vessels outside the dangers of the Port.

From the statement I have the honour to submit, it will be seen that from the 8th to the 16th instant 33 vessels entered the Port: of these only 6 were boarded by Pilots outside the dangers; and 2 (1 at anchor) were boarded close to the Outer Light Ship; 8 were not boarded until they were inside the Port, between the Light Ships; and 17 were not boarded until off or to the Northward of the Inner Light Vessel, and most of them at anchor, having escaped the chief dangers of the Port unpiloted.

The Board are of opinion that by the adoption of their scheme, submitted with my letter above referred to, the delay in supplying Pilots will be obviated, and they therefore solicit the early sanction of His Excellency in Council to their bringing the same into action.

I have, &c.,

H. MORLAND, Lieut., late I. N.,

Secretary.

*STATEMENT showing the number of Vessels boarded by Pilots as they entered the Bombay Harbour, with other details of their arrival, &c., for the week ending 16th June 1866.*

Month and Date.	Names.	Hour when first signalled from the Light House.	Hour of Pilot Boat starting from Bunder.	Position and hour when boarded by the Pilot.	By what Boat.	Pilot's Name.
1866. June 8.	Ship Zealander .....	At 2-15 P.M.	At 2-30 P.M.	Outer Light Vessel S.W. 1 mile at 5-30 P.M.	Pilot Boat No. 3	Mr. Jones.
"	" C. S. Lemon ..	At 11-30 A.M.	At Noon.	Do. N.E. ½ mile at 1-30 P.M.	Ditto	" Dodd.
"	Str. Sir Bartle Frere.	Unknown.	Went on board from the outer bound Str. Saksette.	Close to the Outer Light Vessel at 2 P.M.	Ditto	" Jamieson.
"	Ship Khorasan .....	Unknown.	At 4-45 P.M.	Outer Light Vessel S.W. 4 miles at 5-30 P.M.	Ditto	" Jolley.
"	" Ophelia .....	Unknown.	Boarded after taking the ship Premchund Roychund to sea.	Outer Light Vessel N. E. 3 miles at 2-45 P.M.	Ditto	" Smith.
"	" William Kidstone .....	Boarded after taking the ship to sea.		Do. N E. 2 miles at 4 P.M.		



Month and Date.	Names.	Hour when first signalled from the Light House.	Hour of Pilot Boat starting from Builer.	Position and hour when by the Pilot.	By what Boat.	Pilot's Name.
1866.						
June 10	Ship Baby Castle ..	At 5-45 A.M.	At 6 A.M.	At anchor inside the Inner Light Vessel at 8 P.M. ....	Pilot Boat No. 9	Mr. Dodd.
"	" Lloyd Rayner..	Unknown.	At 6-45 A.M.	Outer Light Vessel S.W. 4 miles at 10-15 A.M.	Ditto	" Smith.
"	" Barque Aden .....	At 6-15 A.M.	At 6-40 A.M.	Outer Light Vessel N.W. ½ mile at 7 A.M.	Ditto	" Meadows.
"	" Ship Camperdown ..	At 5-15 A.M.	At 5-30 A.M.	East of the Inner Light Vessel at 7 A.M.	Ditto	" Jolley.
"	" Egeria .....	At 5-10 A.M.	At 5-25 A.M.	Off the Inner Light Vessel at 7-30 P.M.	Ditto	" Jones.
"	" City of Edinburgh .....	Unknown.	At 2-15 P.M.	Outer Light Vessel S.W. 1 mile at 5 P.M.	Ditto	" Meadows.
"	" Mornington ..	Unknown.	At 10 A.M.	By Outer Light Vessel N.E. 1 mile at noon.	Ditto	" Lawrence.
"	" Gilbert Thompson son.	At 10-55 A.M.	At 11 A.M.	Do. N.E. 4 miles at 2-30 P.M. ....	Ditto	" Jones.
"	" Str. Carnatic .....	At 11-5 P.M.	At 11-15 P.M.	Off the Inner Light Vessel at 1-20 A.M. next day.	Ditto	" Jones.
"	" Ship Richard Cobden.	At 5-25 A.M.	At 5-30 A.M.	At anchor off the Inner Light Vessel at 8 A.M.	Ditto	" Dodd.
"	" Lady Canning..	At 5-25 A.M.	At 5-30 A.M.	Inner Light Vessel S.S.W. 1 mile at 9.45 A.M.	Ditto	" Jolley.

"	"	Phoenix .....	Boarded by the Fort Pilot after taking the Str. Euphrates to sea.	At anchor below the shipping at 11-30 A.M.	Ditto	5	" Smith.
"	12	"	Thistle.....	Unknown.	At anchor above the Inner Light Vessel at 11-30 A.M.	Ditto	9 " Jamieson.
"	"	"	Eurydice.....	At 6-30 A.M.	At anchor Inner Light Vessel S.S.W. $\frac{1}{4}$ mile at 10-30 A.M.	Ditto	3 " Jolley.
"	"	"	Corra Linn.....	At 2-30 A.M.	At anchor off the Inner Light Cutter. Vessel at 6 A.M.	"	" Dodd.
"	"	"	Albertine .....	Unknown.	At 5-30 A.M. At anchor close to Inner Light Pilot Boat No. 6.	"	" Meadows.
"	"	"	Arundel .....	Unknown.	Unknown. Vessel at 11 A.M.	Ditto	6 " Hill.
"	13	"	Mabel.....	At 11-15 A.M.	At 11-30 A.M. At anchor between the Light Vessel at 4 P.M.	Ditto	3 " Jones.
"	"	"	Preston .....	At 11-5 A.M.	At 11-30 A.M. At anchor. Inner Light Vessel S.S.W. $\frac{1}{2}$ mile at noon.	Ditto	5 " Jolley.
"	14	"	Nydia .....	At 5 A.M.	At 5 A.M. At anchor close to Inner Light Vessel at 11-30 A.M.	Ditto	7 " Meadows.
"	"	"	West Riding ..	Boarded by the Fort Pilot after taking the ship Junna to sea.	At 5-30 P.M. miles at 5-30 P.M.	Ditto	1 " Smith.
"	"	"	Sparkenhoe.....	Boarded by Fort Pilot.	At 2 P.M. Between the two Light Vessels at 2-30 P.M.	Ditto	9 " Ingle.
"	"	"	Monitor .....	Do.	At 7 A.M. Between the Light Ships at 4 P.M.	Ditto	9 " Smith.
"	"	"	Dharwar .....	At 5-40 A.M.	At 6 A.M. At anchor above the Light Ship at 2-30	Ditto	3 " Meadows.
"	"	"	City of Ottawa ..	At 5-30 A.M.	At 6 A.M. At Anchor off the Light Vessel.	Ditto	"

Month and Date.	Names.	Hour when first signalled from the Light House.	Hour of Pilot Boat starting from Bunder.	Position and hour when by the Pilot.	By what Boat.	Pilot's Name.
1866 June 14	Ship Amberwitch ..	Unknown.	Unknown.	At anchor close to Rohilla at 11 A.M.	Ship Pilot Boat No. 3	Mr. Corke, Smith and Denis.
"	Str. General Have-At lock .....	At 8-30 A.M.	At 8-40 A.M.	Close to the North of the Dolphin at 9 A.M.	Ditto	Mr. Jolley.

(Signed) J. E. C. PRYCE,  
Acting Master Attendant and Conservator of the Port.

*Office of the Master Attendant and Conservator of the Port,*  
*Bombay, 18th June 1866.*

Forwarded to the Harbour and Pilotage Board, with reference to their Resolution No.  $\frac{1}{9}$ , dated 4th July 1866.

*NOTE.*—The prevalence during the past week of strong S.E. and Southerly winds rendered the putting Pilots on board in-bound Vessels a duty of some difficulty; on the flood tide it was impossible to beat to windward, and on the ebb there was such a dangerous sea running, the Pilots could not board till the Vessels got well into Port and smoother water, the Pilot Boats leading in.

No. 292 OF 1866.

*Harbour and Pilotage I*

*Bombay, 26th June 1866*

TO THE SECRETARY TO GOVERNMENT,  
MARINE DEPARTMENT.

SIR,—In continuation of my letter No. 281, dated 22nd instant, I have the honour, by desire of the Harbour and Pilotage Board, to forward the accompanying copy of statement of Vessels boarded by Pilots, &c., for the week ending Saturday the 23rd instant, as another instance of the inefficiency of the present Pilot Service, and to request that you will favour the Board with the decision His Excellency the Governor in Council has arrived at in reference to the Board's proposition to re-organize that Service.

Secretary Harbour and  
Pilotage Board's letter to  
Government, No. 137 of  
16th April 1866.

I have the honour to be, &c.

H. MORLAND, Lieut., late I. N.,  
Secretary.

**STATEMENT showing the number of Vessels boarded by Pilots as the details of their arrival, &c., for the week ending 23rd**

Month and Date.	Names.	Hour when first signalled from the Light House	Hour of Pilot Boat starting from Bunder.	Position and hour when by the Pilot.	By what Boat.	Pilot's Name.
1866. June 16	Ship Hydree .....	At 4 P.M.	At 4-20 P.M.	Outer Light Vessel S.S.W. 2 miles at 3-15 P.M.	Pilot Boat No. 3	Mr. Meadows.
"	" Ann Warwick..	At 1 P.M.	At 2 P.M.	Off the Inner Light Vessel at 3 P.M.	Ditto	" Dodd.
"	" S. S. Martaban.	At 11 A.M.	At 11-15 A.M.	At anchor off the Dolphin at 2-20 P.M.	Ditto	" Jones.
"	Barque Royal Albert.	At 4-15 A.M.	At 4-30 A.M.	At anchor $\frac{1}{2}$ mile East of Inner Light Vessel at 5 A.M.	Ditto	" Jolley.
"	Str. Catherine Apar.	Boarded by the 2nd Assistant Master Attendant after leaving the Schooner "Coustance."		Outer Light Vessel S. W. 2 miles at 6 P.M.	Ditto	" Smith, and 2nd Assistant Master Attendant.
"	" Yamuna .....	Came in without a Pilot—None available.			.....	.....
"	Ship Eranee.....	At 4 P.M.	At 4-15 P.M.	South of the shipping at 4-30 P.M.	Ditto	" Jones.
"	" Kennington....	.....	.....	Outer Light Vessel S.W. 3 miles at 10 A.M.	Ditto	" Walke.
"	" W. P. Russell..	At 4 P.M.	At 4-15 P.M.	At anchor below the shipping at 4-55 P.M.	Ditto	" Meadows.
"	" Mistress of the Seas .....	Unknown ..	.....	Ditto at 5 P.M.	Ditto	12nd Assistant Master Attendant.

1866.

June 21	Passe Partout..	Do.	.....	At anchor off the Inner Light Vessel at 1-20 P.M.	Ditto	3 Mr. Dodd.
" "	Tennyson .....	Do.	.....	Outer Light Vessel S. W. 3 miles at 2-30 P.M.	Ditto	9 " Walke.
" "	Nasree.....	Do.	.....	At anchor off the Inner Light Vessel at 1 P.M.	Ditto	3 " Meadows.
" 22	Castiglione .....	Do.	.....	At anchor East of the Inner Light Vessel at 6-45 A.M.	Ditto	3 " Jolley.
" "	Euphenus .....	Do.	.....	Off the Inner Light Vessel at 3 P.M.	Ditto	3 " Dodd.
" "	Cambay .....	Do.	.....	At anchor below the shipping.	Ditto	1 " Hill.
" "	Daylight .....	Do.	.....	At anchor above the Inner Light Vessel at 7-30 A.M.	Ditto	9 " Jamieson.
" 23	Varuna .....	Do.	.....	Close to Inner Light Vessel.	Ditto	3 " Smith, Senior.
" "	Khandeish .....	Do.	.....	At anchor above the Inner Light Vessel at 10 A.M.	Ditto	9 " Jamieson.

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*Office of the Master Attendant and Conservator of the Port, Bombay, 25th June 1866.*

J. E. C. PRYCE,

Acting Master Attendant and Conservator of the Port.

Forwarded to the Harbour and Pilotage Board with reference to their Resolution No. 38, dated 4th July 1864

NOTE.—The impossibility of berthing in-bound vessels during the week is owing to the state of the tides to fair ebb, the wind blowing strong from S. W. the vessels are wind rode or athwart. Pilots detained on board respective ships. Yesterday (*Sunday*) nine in-bound vessels were berthed in Port.

(tides) the vessels in port do not receive a chance to berth their

No. 457.

MARINE DEPARTMENT.

*Bombay Castle, 29th June 1866.*

from the Secretary to the Harbour and Pilotage Board,  
dated 26th June 1866.

Forwards a Statement of Vessels boarded by Pilots, &c., for the week ending 23rd instant, as another instance of the inefficiency of the present Pilot Service, and requests to be favoured with the decision Government may have passed on the proposition to reorganize that Service.

RESOLUTION.—The Harbour and Pilotage Board may be informed that the decision of Government on the proposal to re-organize the Pilot Service has not yet been recorded, a reply from the Chamber of Commerce, to whom the proposals were submitted for report, having been only this day received.

J. MACDONALD, Major,  
Acting Secretary to Government.

TO THE PRESIDENT HARBOUR AND PILOTAGE BOARD.

No. 310 OF 1866.

From Commander E. GILES, I. N.,

Master Attendant, Kurrachee,

To Major MACDONALD,

Acting Secretary to Government, Bombay.

*Dated 22nd May*

Letter from Secretary to the Harbour and Pilotage Board, to the Secretary to Government, No. 137, of April 16th, with a Report and Memorandum by the Harbour and Pilotage Board of Bombay.

SIR,—I have the honour to f  
Report called for in your letter 1  
April 27th, Marine Department, covering t  
papers as per margin.

• I have the honour to be, &c.

E. GILES, Commander I. N.,

Master Attendant, Kurrachee.

## REPORT.

I agree in opinion with the Harbour and Pilotage Board, that the system under which the Bombay Pilot Establishment is now worked makes no call on the individual exertion of the Pilots, and that a careless and sloven way of performing their duty is in some cases the result.

2. I agree too in opinion that, were the Pilots paid only for the work performed by each, they would, as a rule, find means to board ships arriving off the Port earlier than is now the case, and that the complaints now so common against the Department would in a great measure cease.

3. The great difficulty that presents itself in dealing with the question appears to be the provision that has to be made for the bad weather of the S. W. monsoon ; the Board remark on this, that at times the present Pilot Boats (which are suitable and trustworthy



ordin (weather) cannot safely venture out, and that it is necessary in consequence to attach a sea-going vessel to the department for duty outside with the Pilots at this season.

4. Even with this assistance, the work, it is stated, has been badly performed, that it is now proposed to introduce an entire change of system.

5. This new system and the rules by which it is proposed to it, are clearly shown in the Reports under notice. The rules for a closer supervision of the Pilots, with penalties for negligence, &c., and the scheme, as it now stands, would, doubtless, be far better than the present plan.

6. The Board have not, however, adopted the free Pilotage system to any extent, and there is consequently no latitude given for individual exertion; true, the Pilots are divided into Companies; but these Companies have no inducement to work the one against the other; as under the rules proposed, all their gains will be thrown together for equal division among the whole establishment.

7. Believing as I do that competition is the chief element necessary to ensure good work, I would strongly advocate its introduction as far as possible.

8. The division of the Pilots into Companies (as proposed) is, I should say, the best arrangement possible under the circumstances, provided each Company work entirely on its own account, dividing among themselves in proportion to their grade, any amount they may actually make, on the number of salary shares allotted them by the Board.

9. There is one other very important point on which I differ from the Board.

10. It is proposed to substitute three Schooners of 100 tons each, of the Liverpool Pilot Class, for the present Pilot Boats.

11. These Vessels to be purchased from surplus funds, now at the Board's disposal, their estimated cost being Rs. 45,000 each, or Rs. 1,35,000 in all.

12. As regards this proposal I would venture to suggest that before expending so large a sum on an entirely new class of vessel it may be well to consider if the inefficiency of the Pilot Boats has been so decidedly established as to make so sweeping a change all at once necessary.

13. The Board have placed on record that these Boats are suitable for the work in ordinary weather (that is for nearly months in the year), and that more work would be done if Pilot's pay depend on individual exertion. May it not be more the fault of the men than of the Boats that things go so badly?

14. For myself I must say that I have always heard the Boats highly spoken of, and I believe them to be safe and well adapted for boarding ships even in monsoon weather out as far as the Outer Light Ship; further I believe that skilful Pilots, working on their own account, would seldom hesitate to proceed beyond this in them on the chance of picking up a ship.

15. Before making the change, moreover, it would be advisable to determine by actual experiment, if the schooners it is proposed to order are suitable for work in this country. I doubt not their being good sea boats, but I much doubt if a serviceable vessel of 100 tons can be sufficiently ventilated to permit a considerable body of men to live on board in all weathers with any degree of comfort, and further, whether native seamen will be able to launch and manage the small Boats these vessels must use for boarding ships in heavy monsoon weather, with the same skill and consequent safety that European seamen could do.

16. Captain Barker (the late Master Attendant) has placed on record (*vide* his Report to the Board, that the plan of substituting Schooners for the present Pilot Boats has already been tried, and failed: now I fully admit this trial was hardly a fair one, as the vessels tried were heavily built of teak, were very low in the water, and much over-masted, still I think that a trial of the kind having been made and having failed, is an additional reason to proceed with caution.

17. I would suggest that one Schooner of the class named ordered, when, if found to answer, a second or third might be ordered, should the Board still think it necessary.

18. Differing from the Board's proposals in the above important points, I think it right to state generally what changes would (it seems to me) be necessary to meet the modifications suggested.

1st. The Companies of Pilots to work independently of each other, and to divide among themselves (in the proportion to each grade \* fixed by the Board) the whole amount they may make on the number of salary shares allotted.

\* The Row Boats, though generally required for Harbour use, might occasionally in light winds be found most useful outside.

At Kurrachee, nearly the whole Pilotage work is done in boats of this class; they are fitted as Life Boats for bad weather.

2nd. Two of the present Pilot Boats with a 6 to 8-oared Boat to be supplied to each Company of Pilots; these Boats to be maintained by them complete for work.

3rd. The Pilot Bunder at Colaba, with a shed for each Company, to be made over, all repairs to Boats to be done at a moderate percentage in the Dockyard, and all stores required for the Boats to be supplied by Government on the same terms.

4th. The Boats of each Company to be painted, so as to be easily distinguished from those of the other Companies, and they should fly a distinguishing flag; each Pilot should be provided with a flag of his own Company's color; this shown from a ship, either in Port or outside, would call one of his own Boats alongside.

5th. A Pilot having secured an inward-bound ship, he or one of his own Company to have the privilege of taking her to sea, or of moving her in harbour, should it be required.

6th. One-third of the Pilots of each Company to be available for duty in Harbour.

7th. The Companies of Pilots shall arrange among themselves rules for working their Boats and cruising outside.

8th. All their arrangements must be reported and be approved by, the Master Attendant; the Senior Pilot of each Company as far as possible should be the channel of communication with that Officer.

9th. Probationary Pilots (paid by the Board) to work on all occasions with the Senior Pilot of each Company, and take orders from him.

10th. The General Rules for Pension, Discipline, &c., as laid down by the Board will still be equally applicable:—

11th. During the moonsoon season (from September) a suitable vessel, fitted out and maintained by the Board, to be placed on the station at the end of the season, she should be dismantled and be laid up.

12th. The Vessel to be officered by three Pilots: one of each grade, 1st, 2nd, and 3rd; one from each Company (to be changed each season). These Pilots will receive their proportion of the Pilotage money made by their Companies (an additional gratuity might be added by the Board at the end of the cruise if the work has been satisfactorily done).

13th. The Senior of the above Pilots, who must be in charge of the Pilot Vessel, should keep a plain mess, (without liquor,) to which each Pilot received on board should pay such daily sum as may be fixed.

14th. The vessels to be open to Pilots from any of the Companies, they being placed on board by their own boats, and she will receive the Pilots from outward-bound ships.

15th. The Pilots must be supplied (from the General Pilot Vessel) to ships arriving, strictly in turn of Companies, No. 1 Company supplying the first Pilot, No. 2 the next, and so on.

16th. Boats of the different Companies to have full liberty  
cruise ships without reference to the general Pilot Vessel.

E. GILES, Commander I. N.,

Master Attendant, Kurrachee.

Kurrachee, 22nd May 1866.

BOMBAY CHAMBER OF COMMERCE,

Bombay, 27th June 1866.

No. 158 OF 1866.

TO THE SECRETARY TO GOVERNMENT,

Marine Department, Bombay.

SIR,—I am directed by the Committee of Management of the Chamber of Commerce to acknowledge the receipt of your letter, No. 285, dated 27th April, handing copy of a Memorandum from the Harbour and Pilotage Board, making proposals for a reconstruction of the Pilotage system of Bombay Harbour, on which Government requests the opinion of the Chamber; and with reference to your subsequent letters of 6th and 26th instant I am further to express regret for the delay that has unavoidably been incurred before addressing you on the subject, owing to the time taken up in circulating the papers amongst the members.

In reply I am now directed to state for the information of Government that the proposed scheme will, in the opinion of the Committee, be a very great improvement on the present system, the inefficiency of which is complained of on all hands.

It is, however, the opinion of the Chamber that the share of the earnings which the Board propose to retain to themselves is excessive.

The Committee can see no reason why on such a system as that proposed, the Board should seek to retain any share of the profits

of the service beyond what may be necessary to sinking fund for replacing schooners lost or worn out, and considering 10 per cent. would, at the outside, be found sufficient for purpose.

The Committee are further of opinion that the scale of remuneration proposed for the Pilots is not sufficient to secure men, thoroughly qualified for their work, taking into account deductions their income will be liable to, the deductions as suggested in reference to the amount proposed to be retained. The Board should be applied to the augmentation of the shares among the Pilots, and this might enable the Board to raise the rate of pay for senior Pilots to Rs. 450 or Rs. 500 per mensem, and others in proportion.

It should also be provided that the five sixty-fourth shares set apart for the payment of the pensions of the old Pilots be applied, after that purpose is served, to the improvement of the Pilot Service, in such manner as may from experience be found expedient.

The Committee also consider that the rate of Rs. 45,000 for each schooner is much too high, but as details are not entered into regarding this part of the scheme, they desire merely to indicate an impression rather than to express an opinion, in order that the matter may be carefully examined by Government.

With the exceptions as to some important points of detail indicated above, the proposed scheme has the approval of the Chamber, and the Committee trust Government may be able to give it consideration, with a view to its being carried out as early as may be practicable.

I have the honour to be, &c.,

JAMES TAYLOR,

Secretary.

MARINE DEPARTMENT.

No. 560.

*Bombay Castle, 13th August 1866.*

Letter from the Secretary, Harbour and Pilotage Board, No. 137, dated  
16th April 1866.

Submits a Memorandum and Resolution by the Harbour and  
Pilotage Board, respecting the improvement and reconstruction of the  
present system of the Bombay Harbour, and requests early consi-  
deration of the subject. Submits also a scheme by Captain Barker  
derived from the proposals of the Board.

Letter from Captain E. Giles, I. N., Master Attendant, Kurrachee, No. 310,  
dated 22nd May 1866.

Reports on the proposals.

Letter from the Secretary to the Chamber of Commerce, No. 158, dated  
27th June 1866.

Submits the Chamber's opinion on the proposals.

RESOLUTION.—Copies of the letters from Captain Giles and the  
Chamber of Commerce should be sent to the Harbour Board, with  
an intimation that Government feel inclined to concur in the mo-  
difications they suggest in the Board's scheme which, in all other  
respects, seems a great improvement on the present system.

Government would be obliged if the Board would take the sug-  
gestions into consideration; and, if they concur, favor Government  
with a revised draft of Rules. It is requested that the present  
system may also be shown in the margin of the revised Rules.

Major,

Acting Secretary to Government.

To

THE PRESIDENT, Harbour and Pilotage Board.

THE SECRETARY to the CHAMBER of COMMERCE.

Captain E. GILES, Master Attendant, Kurrachee.

No. 482 of 1866.

HABOUR AND PILOTAGE BOARD

Bombay, 17th September 1866

From the SECRETARY, HARBOUR and PILOTAGE BOARD,  
To the SECRETARY to GOVERNMENT,

Marine Department.

SIR,—With reference to Government Resolution Marine Department, No. 560, dated 13th August last, I am to state that the Board begs to forward a Minute by their Vice-President, Captain Henry, which has the full concurrence of the Board, and in their opinion meets all the points raised by Commander Giles and the Chamber of Commerce. It may be satisfactory for Government to know that the scheme recommended by the Board, and the opinions given in their report, were framed upon the evidence of a number of Commanders of ships in the Harbour and of the most experienced Pilots in their service.

The Board are of opinion that this subject has been very fully discussed, and that immediate action should be taken, and they urge upon Government the necessity of issuing immediate orders.

I have, &c.,

(Signed) HENRY MORLAND, Lieut., late I. N.,

Secretary.

---

MINUTE BY CAPTAIN HENRY.

*Letter of Captain E. Giles, I. N.*

*Paragraph 3.* The Sub-Committee entertain no doubt as to the ability of the Schooners the Board propose building being able to maintain their position off the Harbour during the South West monsoon.



Vessels of the class intended to be used, are able to keep at sea the winter months off the coast of North America, where the weather is much heavier than it is here in the South West monsoon.

Of course, in a cyclone or very heavy gale of wind the owners will be obliged to run into Port. But in such weather a vessel ought to try and make the Harbour.

*Paragraph 6.* The Sub-Committee do not consider that the fully free system could be worked with advantage in this Port, for the following reasons:—

1. The description of vessels which it will be requisite to enable the Pilots to keep off the Harbour during the South West monsoon are too expensive for men of the Pilot class to purchase or build.

2nd.—The free system only answers well where competition is great. This can never be the case with Europeans in India, and the Sub-Committee would not recommend the admission of Natives into the Pilot service. Moreover they are afraid that the entirely free system would remove the Pilots very much from proper supervision, which they consider would seriously damage their efficiency.

*Paragraph 8.* If Captain Giles had read paragraph 20 of the Board's scheme for the re-organizing of the Pilot service he would have seen that the earning of each Schooner is to be divided amongst her Pilots only, and not to be lumped for the whole service.

*Paragraphs 9, 10, 11, 12, 13, 14, 15, 16, 17.*

In answer to the objections contained in the above clauses as to the Schooners, and to Captain Giles' opinion expressed on the present Pilot Boats.

The Sub-Committee can only refer to the very voluminous evidence already taken which they think fully confirms their first recommendation.

The remaining clauses of Captain Giles' letter contain his proposition for working the Pilot service of this Port. The Sub-Committee consider his plan would be an improvement on the

present one. But they do not think it as good as the one recommended by the Harbour and Pilotage Board.

They are of opinion that no matter what exertions they would use, they could not with their present boats in the S.W. monsoon keep outside the Harbour, or get there in sufficient time after inward bound vessels are signalled from the Light to board them before they have passed the principal dangers entrance of the Port.

---

*Letter of the Chamber of Commerce.*

The Sub-Committee do not consider that the share of the Pilots proposed to be retained by the Board is too large for the following reasons :—

1st.—To give a large proportion of the earnings to be divided amongst the Pilots, would pay them considerably beyond the amount which the standing of this class of men generally receive for similar work.

2nd.—In the event at any future period of the number of Pilots having to be increased, it will be necessary for the Board to make provision for the increase out of the Board's share.

3rd.—The Board will have to spend a large sum yearly towards paying the Probationer Pilots, keeping up Master Attendant and Harbour Cutters, and doing any extensive repairs that the Schooners may require. As of course the Pilots can only be expected to do the ordinary repairs.

4th.—As the Sub-Committee consider that all the Port Dues should be expended on wharfs, light-ships, buoys, anchor boats, &c., they do not think that a smaller sum than that proposed to be retained by the Board will cover the incidental expenses connected with the Pilot service.

The Sub-Committee consider that the scale of pay proposed for the Pilots is quite ample and more than quadruple what this class of men would have received, had they not entered the Bombay Pilot service. Moreover in nearly all instances it is higher than their present salary.

In support of the first reason given, the Sub-Committee beg to send the following table, showing the pay generally received by those of the upper Class of Nautical men :—

*Royal Navy.*—When on full pay, Commanders £365 per year ;  
Lieutenants £200 per year ; Masters average £300 a year ;  
Sub-Lieutenants £91 a year.

*State Indian Navy.*—Commanders Rupees 422 per month ;  
Lieutenants 120 and 150 per mensem ; Masters 175 per month.

*India S. N. Company.*—Captains £400 a year ; Mates £80 a year.

*Merchant Ships employed in the Country Trade.*—Captains from Rupees 150 to 300 per month ; Mates from Rupees 100 to 150 per month.

*Merchant Ships sailing from English Ports.*—Captains from £200 to £400 per year ; Mates from £98 to £120 per year.

*Liverpool Pilots.*—Average about £200 per annum.

Thus it will be seen that the scale of pay proposed for the Bombay Pilots is far in excess of any of the above.

The remark of the Committee of Chamber of Commerce that Rupees 45,000 is too high a sum to pay for each of the Schooners may be correct. But in calculating this as their cost, the Sub-Committee wished to make an outside estimate, and one which would cover all expenses.

It must also be borne in mind that vessels for this particular service must be of a very superior build, and fitted with all the most recent improvements, which will make them much more expensive than ordinary merchant vessels of the same tonnage.

G. F. HENRY,  
Vice-President, Harbour and Pilotage Board.

(True copy)

HENRY MORLAND, Secretary.

No. 692.

*Bombay Castle, 3rd October 1866.*

**RESOLUTION.**—As the Harbour and Pilotage Board after full consideration adhere to their original plan without modification, it is sanctioned, as His Excellency in Council thinks that a practical trial is the only conclusive test of the soundness of the argument used.

The whole correspondence on the subject will be in the volume of Government Selections, and copies will be sent to the Harbour Board and the Chamber of Commerce.

A. R. HOSKINS, Captain, R. A.;  
Acting Deputy Secretary to Government.

To

The PRESIDENT, Harbour and Pilotage Board.

The SUPERINTENDENT OF MARINE.

Captain GILES.

The SECRETARY to the CHAMBER of COMMERCE.



**SELECTIONS FROM THE RECORDS OF THE  
BOMBAY GOVERNMENT.**

No. CI.—NEW SERIES.

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**ABSTRACT**

OF THE

**PROCEEDINGS AND REPORT**

OF THE

**INTERNATIONAL SANITARY CONFERENCE**

OF

**1866.**

---

COMPILED BY

**DR. A. H. LEITH,**

*President of the Sanitary Commission, Bombay Presidency.*

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**Bombay:**

PRINTED AT THE PRESS OF THE REVENUE, FINANCIAL AND GENERAL  
DEPARTMENTS OF THE SECRETARIAT.

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**1867.**

*Price Rupees 1-8-0.*



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## PREFATORY LETTER.

---

HAVING, at the desire of Government, conveyed to me in graph 3 of its letter No. 2262 of 1866, completed an Abstract of the Reports of the Proceedings and Reports of the International Sanitary Conference of 1866, I now have the honor to preface, to offer the following remarks regarding the practical application of the suggestions of the Conference.

2. With the view of extinguishing Cholera at its sources, it is desirable to ascertain the special conditions under which the disease is produced, and, as a preliminary, the precise spots where Cholera is endemic have to be found. This, as the Conference states, is a statistical inquiry.

3. The investigation must necessarily be a work of some years' duration, where there have not already been any trustworthy observations recorded. But in the Island of Bombay a methodical registration of deaths, and their causes and localities, was begun in the year 1848 for the particular purpose of discovering the seats of endemic diseases. The registration has been continued on the very same plan until now, and there is, therefore, in existence a series of recorded observations extending over nineteen complete years. The entries in the register have been tabulated yearly, to show the sections of the town and island in which the casualties happened; but not only the section but even the street in which the fatal disease occurred may be traced in the register.

4. A retrospective search in the register would be attended with considerable trouble, and it may be preferred to begin a systematic tabulation of Cholera deaths. It is desirable that every section or sub-section of the Island should have its table, in which the Cholera deaths should be entered, not only according to the street but also according to the numbers of the houses in which they took place.

In order to trace disease to its source in all parts of this Island a mortuary registration was begun in the year 1864, and the returns of the first complete year were tabulated at the close of 1865. While the work was new, returns according to entire Collectorates only were asked for, but when those who prepared them had become accustomed to the work, returns from the smaller territorial divisions of *Talook* were requested, and they are now being supplied.

6. When, from habit, the rendering of these also ceases to be troublesome, it will be desirable that all towns and villages above a certain size, perhaps those with 5,000 inhabitants, should furnish separate returns. But, in order that the Urban returns may be satisfactory, it is necessary, to carry out the recommendation that has before been made, that burials and cremations be restricted to defined spots under the supervision of the Police.

7. A question has been proposed by the International Conference as to whether the outbreaks of Cholera at places of pilgrimage or fairs are due to the disease being endemic there, although for a time latent, or to its being imported into the place by the assembled people. To aid in solving this question, returns of deaths, according to the form now used in the *Talook*, should be at once required from each of the chief places of pilgrimage. In the mean while those returns should be rendered in addition to

the general returns of the Talook. The Talook returns should continue, as now, to include every death, whether in town or hamlet. These special returns from places of pilgrimage should show the deaths in each section of the town in the way the Collectorate returns show the deaths in each *Talook*.

8. I would propose that such monthly returns should be forwarded to the Sanitary Commission from the following towns and villages, which, besides having large concourses of pilgrims, have a considerable resident population. From Alur and Jejoorec, in the Poona Collectorate; from Shirdi, Pundharpur; from Shiralee and Shignapoor in the Satara Collectorate; Kalkapoor, Sungum and Hyperghee, under Kuladghee; Parola, Alumnair and Nundborbar, in Khandesh; Dakoor in the Kaira Collectorate; Sookulteerth under Broach; and from Nurgoond and Hoolgoor under Dharwar.

9. When it has been ascertained that Cholera is endemic at any place, the recommendation of the Conference should be followed by searching if the place has any exclusive peculiarities; also if Pettenkofer's conditions are present. The nature of the soil and the subsoil, as to porosity or tenacity, should be carefully examined, and there should be a weekly register kept of the measured distances of the surface of the water in the wells from the surface of the ground. The observations on this point are required to show if the outbursts of Cholera are consequent on a change in the level of the subsoil waters, as alleged by Pettenkofer.

10. A return showing the presence or absence of Cholera at the assemblages of pilgrims was obtained for 1865. A similar return is expected for 1866, and it is advisable that a like return should be rendered yearly by Magistrates.

11. It is desirable that facts tending to elucidate the length of the term of incubation of Cholera should be recorded. To be of any value they should be scrutinized with care, and with an intelligence such as can be expected only in an experienced medical man, and in one who can divest himself, during the investigation, of preconceived notions. All well authenticated facts should be communicated to the Sanitary Commission, to be accumulated with others sent, from time to time, for record. This is a task which will have to be carried out with the assistance of the Medical Department.

12. Another point of some importance, as bearing on the selection of attendants for the sick, is to ascertain the comparative immunity from Cholera that is given by a former attack of the disease. This also requires the aid of the Medical Department, as it can be investigated only in regimental hospitals. A register should be prepared in which every man's name is to be entered; those who never have had Cholera should be classed in one column, and in another column those who, on undoubted grounds, can be said to have had Cholera. From such a register it could be found, on an invasion of the disease, what was the percentage of attacks in the two classes. It is chiefly from the Native branch of the Army that information on this point is to be expected, as in it the men are, from their longer service, more often exposed to epidemic visitations than those of the European branch, whose service in India is now but short. But in European as well as in Native Military Hospitals the register of men who have, and who have not, had Cholera should be at once prepared. At the close of every year a return should be sent

to the Sanitary Commission in the following form :—

*Cholera Return of Battery or Regiment for the year 186*

Men who never before had Cholera.			Men who had Cholera before.		
Strength.	Admitted with Cholera.	Died of Cholera.	Strength.	Admitted with Cholera.	

13. Much might be done, under intelligent direction, to destroy the germs, if such there be, of Cholera by the use of powerful disinfectants; and the present time, when the number of cases is unusually small, affords an opportunity of combating the disease in this way in Bombay. There are abundant means of obtaining intelligence of casualties there, and there is an organized Health Service for the town.

14. In order to lessen the evil influence of pilgrimages in disseminating Cholera, the Conference advises that, if possible, the numbers be restricted, by obliging the pilgrims to obtain passes that should be granted only to those who have sufficient means for the journey. This would be of little use, even if admissible, as in pilgrimages in this part of India the distances travelled are not usually very great, and the expenses are but small.

15. The Conference recommends the extension and perfecting of the hygienic measures already in practice. This has from the first been kept constantly in view in this Presidency. In advancement of the sanitary improvement of the places visited by pilgrims, it is desirable that, in order to carry out such improve-

ments as are being effected at Pundhurpoor, the town or village in which the temple stands should be brought under the provisions of the Municipal Act XXVI. of 1850, to enable it to raise the site revenue by such a tax on the pilgrims as is levied at Pundhurpoor, to be expended, as it is there, solely for the sanitary improvement of the town and its neighbourhood, and the health and safety of the pilgrims.

Neither in the Dharwar nor in the Kuludghee Collectorate at present a Municipal Corporation at any of the places mentioned in the course. In the latter Collectorate especially, where there are seven great pilgrimages every year, and where at five of them the numbers range from 40,000 to 75,000, sanitary measures should be speedily introduced. •

17. The International Conference\* advises, when Cholera is among the pilgrims, not to allow the return of the contaminated mass (if practicable) until after the cessation of the epidemic and a general disinfection. While suggesting this, it at the same time acknowledges that at large pilgrimages it would be altogether impracticable. Not only would such a measure be impossible, but it would also be impracticable to defend every village or town from the entrance of returning pilgrims contaminated with Cholera. From small cantonments, where military law and military patrols could be made available, the exclusion of the infected has sometimes been tried to be enforced, and it always should be so. From towns also they should be kept out, if practicable, and, where there are Municipal funds to employ, shelter outside the town should be provided for those kept there under treatment, or under observation.

18. Direct preventive or restrictive measures against the assembling of pilgrims would not be generally practicable, yet there might be occasions on which the Magistrate might, in the exercise

of a wise discretion, forbid for the time, with the sanction of Government, an assemblage at a place where Cholera was then sent, or might forbid the people of an infected village joining concourse. This measure was recommended in the beginning last year, when the Cholera wave from Mysore was entering the Southern Muratha Country.

19. The sanitary condition of Native passenger vessels, their departure from the ports of Bombay has been the subject of several representations since the beginning of 1866, and suggestions that it has been thought necessary to make for amendment of Act XXI. of 1858 are now under the consideration of the Legislative Council of India. The propositions made are that every passenger should have at least the very moderate allowance of twelve feet of deck surface and a cubage of seventy-two feet; that in large vessels a surgeon or medical man should be included in the ship's complement; that a more liberal stock of water and other provisions should be carried; that certain specified means to ensure thorough ventilation between decks should be enforced; that in harbour no one with any dangerous infectious disease should be taken or allowed to remain on board; that before proceeding to sea the ship and all on board be inspected, as to health and cleanness, by a Medical Officer appointed by Government to such duty, and that the Inspecting Officer should cause to be landed every one found suffering with Cholera, Small-pox, or Fever that there was reason to apprehend would by infection prove prejudicial to the health and safety of others on board, or at the port of destination; that the inspecting Medical Officer should be empowered to disinfect the ship and the bedding and clothes of those on board, and that when the sanitary condition of the ship and the health of all on board was satisfactory he should grant a certificate to that purport. It was proposed that the bedding and clothes of those who had died or recovered from an infectious



disease on the passage should not be allowed to be carried into port, but should be destroyed; that the surgeon of the ship should keep a register of the sickness and deaths during both outward and homeward voyages; and that not only vessels carrying thirty or more passengers, but every vessel carrying passengers to the Persian Gulf or the Red Sea, or to Arabia or Africa, should be brought under sanitary supervision.

20. These hygienic measures for the shipping, that have been proposed, will, if sanctioned by the Government of Great Britain, meet what is now found to be recommended by the Conference. There are, however, other suggestions that it is desirable should be adopted in amending the Act: they are that the Native Passenger Act, or what is to be substituted for it in the new Shipping Act, should be made applicable not to British vessels only, but to vessels of all flags without distinction, and that there should be some provision in it to prevent the contravention of its purpose by the masters of British ships in foreign ports.

21. The amendment of the Act that has been suggested to the Government implies the employment of an Officer of Health for the harbour. This is an appointment that is of great importance, and it will be rendered imperative when the quarantine rules proposed by the Conference are put in force by the Governments that sent their representatives so Constantinople, as Bills of Health will then have to be granted to every ship leaving for a Persian, Turkish or Egyptian port.

22. The Conference states that the Moosulman law requires that whoever undertakes the pilgrimage to Mecca shall have means sufficient for the expenses of the journey, and for the subsistence of his family in his absence. No reference is given by which the text of the law can be found, but, as the Moosulman delegates who were present assented when this was put on record, it is most pro-

bably correct. The question might be referred to the Muhumudan Law Officers of Government, and, if it is found that the statement is correct, it appears to be highly advisable that the law should be put in force, because many destitute persons and beggars come from Bombay to embark for the *Huj*.

23. It is not enough that the Indian places of pilgrimage in British territory should be under Sanitary Police rules; it is essential for the welfare of all, that those also in the neighbouring territories of Native rulers should be kept in a healthy condition. British subjects may not be exposed to danger through a break of Cholera in these assemblages. This may, perhaps, be effected by due representation of the apprehended evil, otherwise intercourse between the two territories should be prohibited during the continuance of the pilgrimage, or other assemblage. Oonace, with its hot springs, near Surat and in the Baroda territory, is an instance that has been specially brought to notice, and it is very desirable that the Sanitary Police of that place should be rendered efficient.

A. H. LEITH,

\* President of the Sanitary Commission.

POONA, 23rd January 1867.



**ABSTRACT**  
**OF THE**  
**PROCEEDINGS AND REPORTS**  
**OF THE**  
**INTERNATIONAL SANITARY CONFERENCE**  
**OF**  
**1866.**

THE International Sanitary Conference, proposed by the French Government, for the purpose of finding practical means of preventing future invasions of Cholera, and to which the Ottoman Government had invited the Governments of Austria, Belgium, Denmark, France, Great Britain, Greece, Holland, Italy, Persia, the Papal States, Portugal, Prussia, Russia, Spain, Sweden and Norway, and the United States of America, to send representatives, was opened on the 13th of February 1866 at Constantinople, in the Palace of Galata Serai, by His Highness Ali Pasha, Minister for Foreign Affairs of his Imperial Majesty the Sultan.

The following Delegates took part in the Conference. On behalf of

**AUSTRIA—**

M. Vetersa, Counsellor of the Internunciatory.

Dr. Sotto, Physician to the Internunciatory and Director of the Austrian Hospital.

Dr. Polak, formerly Physician to His Majesty the Shah of Persia.

**BELGIUM—**

Le Comte de Noidans, Secretary of Legation.

**DENMARK—**

Le Chevalier Dumreicher, Consul General and Diplomatic Agent  
at Alexandria.

CE—

le Comte de Lallemand, Minister Plenipotentiary.  
Dr. Fauvel, Sanitary Physician in France.

**BRITAIN—**

The Honorable M. W. Stuart, Secretary to the Embassy.  
Dr. Goodeve, Surgeon Major of the Indian Army, Honorary Physician to the Queen.  
D. Dickson, Physician to the Embassy, British Delegate to the Constantinople General Board of Health.

M. Kalergi, Secretary of Legation.

Dr. G. A. Maccas, Chief Physician to the King, Professor of Chemical Medicine at Athens.

**HOLLAND—**

M. Keun, Counsellor of Legation.

Professor J. Van Geuns.

Dr. Millingen, Delegate to the Constantinople General Board of Health.

**ITALY—**

M. Alexandre Vernoni, Chief Interpreter to the Legation.

Professor Frederico Bosi.

Dr. G. Salvatori, Italian Delegate to the Constantinople General Board of Health.

**PAPAL STATES—**

H. G. Monseigneur Brunoni, Vicar Apostolic.

Dr. Ignace Spadaro

**PERSIA—**

Mirza Malcom-Khan, Aide-de-Camp General to the Shah, Counsellor of Legation.

Dr. Sawas Effendi, Health Inspector at Constantinople, Persian Delegate to the Constantinople General Board of Health.

**PORTUGAL—**

Le Chevalier Pinto de Soveral, Diplomatic Agent.

Dr. B. A. Gomez, Physician to the King.

## PRUSSIA—

M. H. de Krause, Secretary of Legation.

Dr. Mühlig, Physician to the Legation, Principal Physician to Ottoman Naval Hospital.

## RUSSIA—

Dr. Pelikan, Counsellor of State, Director of the Medical Department in Russia.

Dr. Lenz, Counsellor *de College*, Assistant to the Minister for Home Department.

Dr. Bykow, Counsellor of State, Colleague of the Army Medical Inspector Wilna.

## SPAIN—

Don Antonio Maria Segovia, Consul General.

Dr. Monlau, Member of the General Board of Health in Spain.

## SWEDEN AND NORWAY—

M. Oluf Stenersen, Chamberlain to the King, Secretary of Legation.

Dr. le Baron Hübsch.

## TURKEY—

H. E. Salih Effendi, Director of the Imperial School of Medicine, Chief of the Civil Medical Service.

Dr. Bartoletti, Inspector General of the Ottoman Sanitary Service, Member of the Constantinople General Board of Health.

(*For Egypt.*)

Dr. Salem Bey, Professor of Clinical Medicine and Pathology at Cairo.

After a short address by His Highness Ali Pasha, rules for conducting the business of the meetings were adopted, and in these it was laid down that the decision of all questions should be by absolute majority of votes, and that no nation should have more than two votes.

A Commission was then appointed to draw up a scheme of the work to be done by the Conference. The Members were His Excellency Sahib Effendi, Drs. Sotto, Monlau, Le Comte de Lallemand, M. Vernoni, Mirza Malcom-khan, Drs. Goodeve, Mühlig, Pelikan.

Dr. Fauvel, in the name of the French Delegates, proposed a measure, which, on account of its urgency, should have the priority of other business, that, with a view to prevent a fresh invasion of Cholera into Europe, should Cholera appear this year among the Mecca pilgrims, all maritime communication between the Arabian Ports and the Egyptian Coast should during its continuance be cut off, the caravan road by the desert of Suez being left available for the return of the Egyptian or other pilgrims. A journey by the desert was viewed as equivalent to undergoing quarantine.

The proposition was opposed, partly on account of its probability of creating a panic, and partly because of its alleged inhumanity in forcing on the pilgrims the alternative of remaining exposed to the dangers of the epidemic, or undertaking a journey through the desert, for which they had provided neither supplies nor carriage. The practical difficulties in carrying out the proposal that presented themselves were urged by the representatives of the Turkish Government.

This measure occupied the Conference at its four following meetings, and was at last carried by a majority of votes, the dissentients being the representatives of Great Britain, Russia, Turkey and Persia. Another meeting was held to discuss the rules that should be adopted for carrying out the blockade of the Arabian and Egyptian coasts, if Cholera were reported to be among the pilgrims.

At the seventh meeting of Conference, on the 8th March, the Committee that had been appointed to prepare a scheme of the work to be done, submitted its report.

The Committee stated that, before entering on the practical points, it was necessary to consider certain preliminary questions of a more especially medical kind, such as the origin and mode of propagation of Cholera, and particularly to determine what positive knowledge there was of the subject, while it left for the study of scientific bodies all that was foreign to the practical end that the Conference had to keep in view.

The Committee had arranged the prospective labours in three groups—the first embracing the question of the origin and generation of Cholera; the second that of its transmissibility and its propagation; and the third the important question of prevention. Each of those groups included certain questions for the attention of the Conference; not to limit its inquiries, but to give them such a direction as would lead surely and readily to a practical result. The Commission allowed that very probably some of the questions could not be satisfactorily solved in the present state of our knowledge, but thought that even a negative result would have its value in practice, because the disclosure of uncertainty would lead to the choice of the more rational action on which to build.

Details of the proposed scheme were given in the Report, but in the subsequent discussions in Committee it was found to be necessary to depart from the order first proposed, and to modify the questions, so as to allow of greater precision in the elucidation of the points at issue.

The Conference appointed a Committee to report on the several questions included in the two first groups, and, as the subjects were almost purely medical, the Medical Delegates were requested each to take his share in the labours, while the Diplomatic part of the Conference was to be represented in the Committee by three of its number.

The Committee having chosen Dr. Bartoletti President, and Le Comte de Noidans and Baron Dr. Hübsch Secretaries, divided itself into six sections or sub-committees, each having its particular task.

After many meetings to discuss the work of the various sections and to incorporate the whole, the Committee submitted its Report to the Conference in May, and after it had been under examination at many meetings, it was, with a few modifications and additions, adopted by that body on the 2nd of July. The following is an abstract of the approved Report on the first group of questions.



ABSTRACT OF THE REPORT  
ON THE  
**IGIN AND GENERATION OF CHOLERA**  
AND ITS  
**ICITY AND EPIDEMICITY IN INDIA.**

THE Committee expresses its regret that those questions which it was of most importance to solve, remained unsettled from want of sufficient recorded information, but states that it had been able to answer categorically many of the questions that had been proposed, and also to frame in precise terms the problem, the solution of which was of interest to the whole world.

QUESTION 1st.—*Whence comes Asiatic Cholera? Is it indigenous? In what countries is it now endemic?*

It is beyond doubt that, from the time of the first establishment of Europeans in India, a disease having the greatest analogy to the Cholera of our day, was sometimes prevalent there and in some neighbouring countries, in a severe epidemic form. Without going farther back than the latter part of last century, regarding which reliable information does exist, several epidemic visitations of the disease were noted in different parts of India, and in provinces in some instances very far apart; such were the epidemics observed in 1783 at Hurdwar in the north of India, and at nearly the same time in Travancore, at the south of the Peninsula.

But from the end of last century, whether the disease was altogether extinguished, or rather that it escaped the notice, medical men owing to its little importance, there was no mention made of epidemic Cholera in India, or elsewhere, until 1817. The English physicians in Jessore, who for the first time met with the epidemic form of the disease, believed they had a new malady to deal with.

Whether the disease of 1817 was or was not the same as that of former epidemics, it was from that year that a new chapter in the history of Cholera began. Instead of being confined to localities of its outbreak, it assumed an invasive character over the greater part of India, and passed beyond its limits through the outlets that gave passage to streams of human beings.

For several years the disease died out before it had proceeded far, but at last it found a way by the north-west, by which it travelled, until in 1830 it made itself known in Europe. It had appeared for a short time in Astrakan in 1825. This epidemic died out in all parts of the world which it had visited, excepting India and its neighbourhood, where since 1817 it has not ceased to exist.

From this permanent source have flowed repeated epidemics of Cholera, which have followed the most ready routes. That of 1847 entered Europe by the Caspian and Black Seas, while southward it stopped in Mesopotamia and the Hijaz. In 1865, by aid of more rapid transport, the disease arrived quickly by the shortest route on the shores of the Mediterranean.

Without hesitation it is replied by the Conference that *the Asiatic Cholera, which has several times spread over the world, is indigenous in India, where it had its birth, and where it exists permanently as an endemic.*

**QUESTION 2nd.**—*Is Asiatic Cholera endemic anywhere out of India?*

No proof has been shown of Asiatic Cholera having ever had any other point of departure than India, and it is probable

that in no other country does it exist as a permanent endemic, capable of spreading in an epidemic form; but it is thought right to make a distinction between the countries in the neighbourhood of India, such as Indo-China, China, the Indian Archipelago (except the Dutch possessions), Afghanistan, Beloochistan and the eastern and southern coasts of the Arabian Peninsula, regarding which there is not sufficient information, and the countries into which it has undoubtedly always come from without, such as Europe, the Caucasian provinces, Turkey in Asia, all the North Africa, and the two Americas.

The Conference distinguishing between primary and secondary sources, more or less persistent, considers as demonstrated that invasive *Asiatic Cholera* is never developed spontaneously, and has never been found to be endemic in the countries of the latter category. As to the countries in the neighbourhood of India, while admitting the probability that Cholera does not exist in them as an endemic, it cannot be formally concluded that it does not.

This was agreed to by all, except two.

QUESTION 3rd.—*Is there not reason to fear that Cholera may become naturalized in our (European, &c.) countries?*

The reply to this can be but doubtful. If it is borne in mind that the epidemic of 1847 lingered longer than the preceding, and furnished secondary sources of the disease in some localities—St. Petersburg for example—it appears likely that by repeated invasions the principle of the disease may in some manner be naturalized.

The Conference, without rejecting the possibility of the occurrence, regards it as problematic.

QUESTION 4th.—*Is there in the Hijaz an original source of Cholera, either permanent or periodic?*

There was no mention of epidemic Cholera in the Hijaz before 1831, nor was there a name for it there, before the invasion

of that year. Since then it has frequently appeared, and there are particular notices of epidemic visitations of it in 1835, 1847, 1848, 1859, and years following, up to the great epidemic of 1865. The presence of Cholera at Judda every year, at the time of the return of the pilgrims, from 1859 to 1864 is attested by the Report of the English Consul at that port. If to these circumstances it is added that the manifestation of Cholera in the Hijaz has always been coincident with the season of the pilgrimage, the opinion, general in the country, is that it is always imported by pilgrims coming from India, and that on many occasions, notably in 1865, as is averred, arrivals from India affected with Cholera entered the Hijaz before the disease had yet appeared itself there, the conclusion is arrived at *that Asiatic Cholera does not appear to have an original source in the Hijaz, but that it appears to have been hitherto always imported there.*

This conclusion was adopted by a majority of the Conference. Dr. Goodeve thought that the facts stated did not suffice to establish with certitude the alleged importation in 1865. On the other side it was said that the conclusion was not affirmative; it merely stated a probability, and not a certainty. Dr. Millingen, while admitting that the repeated importation may be due to arrivals from India, disputed that the importation was invariably and exclusively by pilgrims, and consequently that the importation always coincided with the pilgrimage. In 1846 the epidemic at Judda and Yambo occurred in May, that is six months before the pilgrimage, which in that year was in November. There was, however, in May the great yearly Fair, to which Indian and other merchants flock.

**QUESTION 5th.**—*Are there certain localities in India where alone Cholera is engendered, or which are particularly favorable to its development? In other words, is Cholera endemic in all parts of India, or only in certain districts, which it is possible to circumscribe?*

Observations have proved that Cholera reigns by preference as an endemic disease, with a tendency at certain times to

assume an epidemic form in all Bengal, but chiefly in Calcutta, with less severity at Cawnpore and Allahabad, and their neighbourhoods; and as regards the rest of India, at Arcot near Madras, and at Bombay.

It appears epidemically every year, or nearly every year, in Madras, Conjeveram, Pooree, Tripetty, Mahadeo, Trivellore, and other places where congregations of Hindoo pilgrims take

place. It appears as an epidemic at uncertain intervals, which, for the most part, exceed four or five years, in the north-western Provinces of Hindoostan; also in all parts of the Presidencies of Madras and Bombay, and in Pegu.

To say merely that Cholera is endemic in the valley of the Ganges, and in the Delta formed by that river and the Bruhmapootra, without indicating with more precision the points of that vast extent where it is endemic, is to leave the question in uncertainty. The Conference had hoped to receive official documents fitted to throw light on this chief point in the etiology of Cholera, but it did not receive them, doubtless from want of time to prepare and send them from India.

It will not be enough to know where Cholera now is permanent; it will be necessary also to know if there are spots where the disease has never been absent since it has been studied; if there are places whence it has disappeared again to return; and again what are exactly the localities where it has become endemic comparatively recently, if such there be. Lastly, is it very certain that Cholera is endemic only in the spots indicated, and is there not reason to suspect that it is also so in certain places of pilgrimage where every year Cholera becomes epidemic?

The knowledge of the endemic sources will not be enough. It is of importance to add to that, information as to the principal epidemics which have prevailed in India since 1817, and the points of their departure should be given with all possible precision, in order to ascertain whether or not those epidemics had

their origin in an endemic source, or resulted from arrivals from such a source. It is probable that the Indian records would afford decisive elucidation of this question. It will be interesting to know if there are any localities in India that have hitherto resisted the propagation of Cholera.

By the aid of such information it would, perhaps, be possible to verify that which we now suspect, that in India there are only a small number of endemic sources of Cholera, from which have issued the epidemics that have ravaged first that country and then the world.

It can at present only be replied to the question *there are in India certain localities, chiefly in the valley of the Ganges, where Cholera is endemic, without its being possible to particularize all, or to affirm that they exclusively give birth to the disease.*

This conclusion was adopted unanimously.

QUESTION 6th.—*Do we know the concurrence of causes under which Cholera has its spontaneous birth in India; also the circumstances which make it take an epidemic form?*

Nothing has been determined as to the circumstances which may give birth to Cholera, or render it endemic in India.

The hypothesis that it was attributable to the alluvium of the Ganges and Bruhmapootra, rendered particularly deleterious by the fermentation of animal and vegetable matter, also the hypothesis of Dr. Bonnafont and others that it was due to the East India Company having allowed the great hydraulic works of the former rulers of the country to fall to ruin, were refuted to the entire satisfaction of the Committee. Dr. Goodeve stated that there were other rivers with similar alluvium without Cholera; that not only since 1817, but from time immemorial, dead bodies were thrown into the Ganges; that the Delta never had hydraulic works. Any ruins of such in other parts dated from the decay of the Moosulman empire and its struggle with the Murathas.

Under the British such works had been promoted. The Committee thought, as he did, that the development of epidemic Cholera in India could not be attributed to any new conditions of salubrity, attributable to the negligence of the English administration.

The hypothesis that would explain the origin and endemicity of Cholera by hygienic conditions which were found in the degree where the disease was not endemic, were not to be maintained.

It is proved that the endemic state of the disease exists in certain localities in India, and it can be established that this state is in some manner new, it follows necessarily that this Cholera of recent permanence should be referred to some new and special circumstance in those localities. But it has been said that no new or special circumstance has yet been ascertained in the Delta of the Ganges, since Cholera has reigned there endemically. That, however, still remains a question to be answered. *The permanence of the disease in certain places cannot be explained by successive transmissions, but only by something inherent in those places.*

The words "*has its birth*" were objected to, but the Conference, nevertheless, unanimously adopted the conclusion *that we do not know the special conditions under which Cholera has its birth in India, and reigns there endemically in certain localities.*

QUESTION 7th.—*What are the circumstances that conduce to the development and propagation of epidemics of Cholera in India?*

All that can be affirmed on this subject is, that in Bengal Cholera assumes the epidemic form in the hot season from April to August. In the North-west Provinces the severest epidemics have been chiefly in July and August, and have ended at the beginning of winter. At Bombay, as at Calcutta, the disease has raged principally from April to September. Also in Madras, where the seasons are less defined, it is in the hottest time of the

year that Cholera shows itself epidemically with greatest severity. The hot season is favorable to the development of Cholera, but it is not indispensable to it, and, considered singly, it cannot be regarded as the cause of the epidemicity.

The circumstances that evidently have a special action are great assemblages and emigrations of men, and particular pilgrimages that take place at stated times in many parts of India.

The pilgrims arrive at the sacred place from all directions and often after a journey of hundreds of leagues, made always on foot, during the hot season, and they arrive with fatigue and misery. In the sacred towns their condition is aggravated by horrible thronging; by all the causes of infection that result from it; by bad food, bad water, debauchery; in a word, by a crowd of circumstances fitted to favor the development of Cholera among them. Then at last, when the multitudes disperse, they go disseminating the disease in their journey, and thus become more or less active agents in the propagation of the epidemic.

It is to be noted that these places are not considered sources of endemic Cholera, and that the disease after the departure of the pilgrims dies out, and re-appears, more or less, periodically only at the time of the pilgrimage. It is very important that inquiry should be carefully made whether or not Cholera is always imported into the places of pilgrimage by persons coming from endemic or epidemic sources. In the mean while, judging by analogy, *the probability is that in India, as everywhere else, beyond endemic sources, the importation of Cholera is a condition necessary to its development as an epidemic.*

It is impossible not to acknowledge that in India pilgrimages have a chief influence in the development and propagation of Cholera epidemics; then come, but with much less influence, the movements of troops, as observed principally in the Madras Presidency.

If to these causes are added the increasing facilities of rapid communication by railways and by steam vessels, is there



not reason to fear an increasing frequency, and a more and more rapid extension, of epidemics of Cholera in India, and, as a consequence, an equally increasing danger to Europe of its importation?

In discussing the proposed conclusion, Dr. Goodeve wished the words "one of the most powerful" substituted for the "most powerful." The conclusion adopted by the Conference, however, was *that pilgrimages are in India the most powerful of the causes which conduce to the development and to the propagation of epidemics of Cholera.*

# THE TRANSMISSIBILITY AND PROPAGATION OF CHOLERA.

## THE SECOND GROUP OF QUESTIONS.

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QUESTION 8th.—*Is the transmissibility of Cholera now proved by facts that admit of no other interpretation?*

THE transmissibility of Cholera is proved *first* by the progress of its epidemics; whether by land or by sea, its extension has always been in the direction of streams of human beings flowing from a place where it has prevailed. This law of propagation has never been better shown than in the epidemic of 1865.

Imported, as assumed by the Conference, by the Indian pilgrims, it broke out at Mecca during the *Courban Bairam* in May; it followed the pilgrims in their return by Egypt, and appeared at Alexandria in the beginning of June, after the arrival of the *Hajee* from Suez by the railway. From Alexandria it radiated in all directions taken by steam vessels, and appeared almost at the same time at Beyrout, Smyrna, Constantinople, Malta, Ancona, and Marseilles, that is to say, wherever the principal streams from Alexandria touched; while it did not yet manifest its presence at any other points of the coast. These ports became new centres, from which the disease propagated itself in different directions, but always in the course of great thoroughfares; and the railways were a means of its speedy conveyance to great distances.

On the other hand, on the return of the Persian pilgrims from Mecca, Cholera broke out at Bussora ; and there is some reason to believe that the Javanese pilgrims brought it back to Surabang.

When Cholera has appeared in an island, or in America, it has always been first at a sea coast town, and not in the interior country.

The speed with which epidemics of this disease have travelled from India to Europe has increased with the increasing facilities of transport. The two first epidemics advanced with a gradual, and often retarded by the difficulties of the road, while that of 1865 came with prodigious rapidity, *yet never faster than the means of transport in use*. It left Mecca at the end of May, and reached America in October. The time of transit from the Moosulman sacred places to Paris was but three and a half months.

The Conference was of opinion *that all the facts hitherto ascertained demonstrate that Cholera is propagated by man, and with a speed proportioned to the amount and rapidity of his emigrations.*

*Secondly*—It is proved by facts establishing the propagation of the disease by importation. We need not seek the facts in the great centres of population on the European Continent, where the movements of the people are so multiplied and complicated that it is almost impossible to follow closely the connection of circumstances. The conclusive facts are chiefly furnished by small localities and sea-ports, where the arrivals are easily controlled.

The Committee brought forward instances connected with former, as well as the most recent, epidemics, and, among others, those noted regarding the importation of the disease at Constantinople, Borchio, Altenbourg, and at Theydon Bois in England.

*Thirdly*—It is proved by the progress of epidemics of Cholera in affected localities. This class of proofs does not really differ

from the preceding; it is the verification of the transmissibility by the way in which the disease, once manifested, diffuses itself.

It is a rule, resulting from observation, that an epidemic of Cholera does not at its outbreak appear simultaneous in many places in the same territorial limits, but begins at one only. Published reports of the progress of Cholera are given in illustration by the Committee.

*Fourthly*—By proofs taken from the efficacy of certain preventive measures, such as rigid separation, and, above all, suspension of communication by sea with infected places. If the success of these measures are given, and the Committee unanimously adopts the conclusion *that the transmission of Asiatic Cholera is incontestable, and is proved by facts that admit of no other interpretation.*

QUESTION 9th.—*Are there any conclusive facts that constrain us to admit that Cholera can be spread to a distance by certain conditions of the atmosphere, by winds, or any other change or modification of the air?*

The question is repeated by the Committee in other words—Can the atmosphere serve as a vehicle for the principle of the disease, and carry it to a distance?

This question, it says, is of great importance, since if the answer were in the affirmative it would follow that quarantine could be of but very questionable efficacy.

For proof at least one conclusive fact is requisite, one which will show the transit of the disease from an infected to an uninfected place without possible previous communication. The Committee states that there is no such fact, and that it has been able to convince itself of the little weight of all that has been asserted on the subject.

It has, doubtless, not always been possible, for reasons given above, to demonstrate the communication between the place

previously and that subsequently infected, but wherever the investigation has been made with care, and the conditions of the locality have favored the inquiry, a previous communication has been ascertained.

No conclusive fact, then, proves that Cholera has been carried from a distance, from one place to another, by the medium of the atmosphere alone. Yet it is incontestable that the air is chief, if not the sole, vehicle of the Cholera principle.

Even in absence of any authentic fact, one might yet think transmission by the atmosphere possible, if it could be proved that the passage of Cholera from one point to another had been more rapid than the means of communication employed by man. But it is a law, hitherto without exception, that Cholera has never advanced quicker than man in his migrations. The Conference unanimously adopted the conclusion of the Committee, that hitherto no fact has proved that Cholera can spread to a distance by the atmosphere alone, whatever may be its condition.

QUESTION 10th.—*How is Cholera imported, and what are the agents in its transmission?*

From all that has been learnt, there are two things necessary to the outbreak and the spread of Asiatic Cholera in a locality—an arrival from an infected place, and circumstances that favor the transmission. As regards the former, an arrival with Cholera is a complex affair; it includes man and his clothing, personal effects, merchandise, animals, the ship which carries him, and, in short, all that accompanies the man. Is all that constitutes an arrival equally capable of transmitting the disease?

It was a long while believed that the lapse of a few days between the departure and arrival without appearance of Cholera was a sufficient guarantee against the importation of the disease. But well attested facts show that even a long voyage, without appreciable accidents, does not ensure against danger. On the other hand, it is certain that the regular packet boats, that for many years have plied with India, have never imported Cholera

into Suez. Without at present entering into particulars, it may be concluded that, even if every arrival from a country affected with Cholera be not capable of propagating the disease, it is the less prudent, pending fuller information, to consider an arrival as suspicious.

QUESTION 11th.—*What are the conditions in which man in Cholera?*

There is no doubt as to man being the principal in the importation of the disease. The arrival of a great number suffering with Cholera is not necessary for the causing an epidemic. A few sick, or even a single case, may suffice. There is no proportion between the amount of Cholera imported and the intensity of the ensuing epidemic. The intensity is influenced by the more or the less favorable conditions of the locality, as a conflagration is not in proportion to the spark that kindles it, but to the inflammability and the quantity of material that it meets with. One person with Cholera may occasion an epidemic.

QUESTION 12th.—*Can an individual with only Choleraic Diarrhœa communicate Cholera?*

Authors of high authority affirm, and produce facts which tend to prove, *that a person coming from a source of Cholera, and although suffering only with Diarrhœa, may import the disease.* The Conference concludes that certain facts tend to prove this, or, in other words, *that the Diarrhœa called premonitory may transmit Cholera.* But there is no proof that persons apparently in perfect health arriving from a place where Cholera is present can import the disease into a place hitherto exempt from it.

There have been examples that show that Cholera has broken out after the arrival of persons in apparent health. But has it been possible to ascertain, if they were really so, that they had no Diarrhœa? In most cases it would be impossible to ascertain this. Again, supposing that all premonitory symptoms were absent, and Cholera were to break out after their arrival, would it be right to

conclude that those healthy persons had themselves brought the disease? May they not have brought infected things with them?

QUESTION 13th.—*What is the length of the time of incubation?*

The time that elapses between the entry of the supposed morbid agent into the organism and the manifestation of the first symptoms of the disease is usually very short. In the immense majority of instances it is a few days, and sometimes it is only a few hours. This is put beyond doubt by the first cases after an outbreak of the disease; a few days only, at most a week, passes between the imported cases and those derived from them. In ships leaving an infected place, if Cholera shows itself on board, it is usually during the first days of the voyage, and it is from this generally admitted fact that the five days' observation in quarantine has been adopted. There are, however, exceptional cases, which favor the belief that the incubation may be prolonged beyond twenty days.

The instances of the emigrant ships *New York* and *Swanton* are cited from the records of the epidemic of the year 1848, and of the *Renown*, which sailed from Gibraltar in 1865. But, it is asked, who can be sure that in these exceptional cases there was no Diarrhœa before the attacks? Or admitting that there was none, and if it be proved that goods and clothing brought from a source of Cholera may be the receptacle of the morbid principle and convey the disease, may it not be that the disease was contracted on board during the voyage?

The Conference adopted the conclusion that *in nearly all cases the period of incubation, that is, the time lapsed between the moment when a person can have contracted the Choleraic poisoning and the beginning of the premonitory Diarrhœa, or confirmed Cholera, does not exceed a few days; all the cited facts of a longer incubation are referable to cases which are not conclusive either because the premonitory Diarrhœa has been included in the period of incubation, or because the infection may have occurred after leaving the infected place.*

QUESTION 14th.—*Can Cholera be imported and communicated by living animals?*

The question has two aspects. Are any animals liable to have Cholera and to transmit it as man does; or can living animals, not sick, be the receptacles of the principle of the disease, and import it?

Some authors, deserving of consideration, have no doubt that certain animals being liable to attacks that have a great analogy to Cholera. But their facts are far from being convincing.

A living animal may, by its covering, be a receptacle for the disease.

The Conference concludes that *there is no known fact that proves that Cholera may be imported by living animals; but it is reasonable to consider them in certain cases as susceptible articles.*

The Members were unanimous as regards the former part. For the latter part of the conclusion sixteen voted in favor, eight voted against it, and three did not vote.

QUESTION 15th.—*Can Cholera be imported and transmitted by linen clothing, and generally by things in personal use?*

Instances in proof of the proposition are quoted by the Committee. They occurred at Cessantes near Vigo, Moor-Monkton near York, Lustheim, near Munich. The case, which occurred at York, and was related by Dr. Simpson, is given to show that not only may Cholera be so transmitted, but that an article of dress that had been worn by a person suffering under Cholera, when taken, after an interval of ten months, from a drawer in which it had been shut up, reproduced the disease. Also Lebert's case at Lugano, when the wearing of the clothes of a person who had died two months before communicated the disease; and Pappenheim's cases in which lying on beds that had been used by those ill with Cholera had occasioned the disease, when the epidemic had entirely ceased.



The Committee remarks that if these facts—and they might be multiplied—do not produce absolute certainty, they establish at least such probability for them as to render them of great

Other facts are said to prove that in India the encamping ground where there was an epidemic, the ward of an hospital, on a ship in which sufferers from Cholera had been, may, at certain time and under certain conditions, transmit the disease.

It is right to note that usually articles in personal use, coming from where Cholera is prevalent, do not import the disease. There are certain conditions necessary—and they are happily rare—to render things in use capable of importing and transmitting Cholera.

Those conditions are shown in the examples given of the transmission having taken place. The distance of transport has been little; the articles in question have been recently in contact with the sick, or have been soiled with their dejections. But it is evident that such circumstances must be rare as regards the property of travellers. It is not, however, impossible that soiled linen may be shut up in a trunk. When there has been transmission long after the cessation of an epidemic, it has always been when the tainted articles had been shut up, and more or less kept from the contact of fresh air. There are no instances of articles exposed to the free air which beyond a short time (the exact time is unknown) have transmitted Cholera, while there are instances tending to prove that transmission can take place by means of articles kept shut up for many months.

The open air purifies infected articles; and, far from being able to transport to great distances the generating principle of Cholera, the air destroys it rapidly.

The Conference adopts the conclusion, *that Cholera can be transmitted by articles of personal property coming from an infected place, and especially by those which have been used by sufferers*

*under Cholera ; and that certain facts prove that the disease may be carried to a distance by such articles shut up from the access of fresh air.*

QUESTION 16th.—*Can Cholera be imported and transmitted by merchandise ?*

The Committee reports that no instance can be cited proves that Cholera has been communicated by merchandise imported from a country where that disease was prevalent. In particular, merchandise imported from India, either directly into Europe, has never transmitted Cholera. However, this does not prove the impossibility of such an occurrence, especially as merchandise includes articles highly capable of being impregnated with the morbid principle, such as rags, hides, &c. It is unanimously agreed that there are no proofs of the transmission of Cholera by merchandise ; a majority of 16 against 8 admitted the possibility under certain circumstances.

It was agreed by several that, instead of giving an opinion regarding merchandise generally, when the absence of all proof was acknowledged, it would be more proper to specify what substances might reasonably be suspected.

The Conference concluded that, until fuller information be obtained, it will be prudent to consider as suspicious, unless in particular and defined conditions, every arrival from a centre of Cholera. The voters were unanimous ; Drs. Goodeve, Pelikan and Polak, did not vote.

QUESTION 17th.—*Can the bodies of those who have died of Cholera be the means of importing and transmitting the disease ?*

In Europe, when corpses are carried to a distance, it is with such precautions as remove all fear of danger. In Asia, however, it is customary in many countries, in Persia for instance, to carry the dead to great distances.

Many medical men, who have of late studied the question, are of opinion that the bodies of those who have died of Cholera are active agents in its transmission. It has, however, been proved that those who have occupied themselves most with the pathologic anatomy of Cholera, and who have examined hundreds of bodies, have not been more subject to the disease than others.

The Conference concludes *that although it is not proved by existing facts that Cholera can be transmitted by means of such bodies it is prudent to consider them to be dangerous.*

QUESTION 18th.—*What influence have the different modes of communication, by land or by sea, on the propagation of Cholera?*

A ship, although not the most rapid means of conveyance, is the most dangerous, because it can carry in it all that constitutes a source of Cholera. It can convey an epidemic, and can do so under the conditions of confinement and infection that are most favorable to its transmission.

Railways, although capable of carrying the disease more rapidly from one place to another, are not so likely to propagate an epidemic. It is not very often that Railways convey those ill with Cholera, and those that emigrate by them from an infected place do not usually belong to the class that suffers most from the disease. These circumstances, added to the airing and to all the other circumstances that tend to the extinction of the principle of Cholera in such a journey, more than counterbalance the danger resulting from the number of the travellers. It ought to be admitted that in certain circumstances, such for instance as the transporting of troops, they might be the occasion of propagating the disease. The conclusion unanimously agreed on by the Conference is, *that communications by sea are, from their nature, the most dangerous; that it is they that most certainly spread Cholera; and that then come communications by Railways, as they, in a very short time, can carry the disease to a great distance.*

**QUESTION 19th.**—*What is the influence of deserts on the propagation of Cholera?*

An experience that reaches back to the first appearance of Cholera out of India, teaches that a great desert is the best obstacle to the propagation of the disease. Such a desert has never been passed at a leap, and even a numerous caravan coming from a place affected with Cholera has thrown it off by degrees on its march across the desert, and arrived entirely free from it. The time of its journey has lasted more than twenty days.

The pilgrim caravan leaving Mecca with Cholera—has happened rather often—has never carried the disease to Egypt. Documents prove that when this caravan has quitted Mecca with Cholera in its midst the disease has always died out after a march of one or two weeks. The same may be said of the Mecca caravan which returns to Egypt by Suez; it has never brought Cholera into Egypt, and it has been proved that if in 1831 it was brought there by pilgrims, it was by those who returned by sea, and not by the caravan. The caravan did not arrive until afterwards.

The same remark is applicable to crossing the deserts that separate Bagdad from Damascus and from Mecca. And also to the deserts of the north of Africa, as verified by Dr. Dickson during the epidemics of 1850 and 1855, when Cholera never extended beyond three stages into the desert. The same, it is said, has been observed in the United States by Dr. Byrne.

It is concluded by the Conference, as the result of experience, *that great deserts are a very effectual barrier to the propagation of Cholera; and the Conference notes that there is no instance of that disease being imported into Egypt or Syria by caravans coming from Mecca.*

**QUESTION 20th.**—*What is the influence of assemblages or congregations (agglomerations) of men on the intensity of epidemics of Cholera; also on the propagation of the disease? and under what conditions does that influence operate?*

In order to answer these questions it is necessary to look at his influence as it presents itself in ships in lazarets, in armies, at fairs, at pilgrinages, and especially that of Mecca. On the other hand, it is necessary to show the effect of dispersion, whether in diminishing the intensity of epidemics, or in propagating them. Before entering on the details of these different points, a general answer may be given to the questions. The Conference has unanimously the conclusions *that every assemblage of men in which Cholera appears is a condition favorable to the rapid extension of the disease, and if the assemblage is in a bad sanitary condition, it increases to the violence of the epidemic.*

*In like circumstances the rapidity of the extension is in proportion to the concentration of the congregated mass, while the violence of the epidemic (all other things being equal) is the greater the less the individuals have already been under a Choleraic influence, or if they remain uncontaminated by it; that is to say, in other words, that those who have already been under the influence of a source of Cholera have a kind of relative and temporary immunity that counterbalances the grievous effects of the agglomeration.*

*Lastly, that in a congregated mass the more rapidly the epidemic spreads the more quickly also does it cease, unless new healthy arrivals furnish fresh aliment to the disease, and so sustain it.*

QUESTION 21st.—*What intensity and persistence have epidemics of Cholera in ships?*

Without doubt, the circumstances on ship board are most favorable to the rapid development and the violence of an epidemic. A narrow space, badly ventilated, the impossibility of sufficiently isolating the sick, and the resulting foul air, make a ship, crowded with men, the medium that is most favorable for an epidemic.

All ships, the crowding being equal, do not run the same danger on an invasion of Cholera. Those that on leaving a source of Cholera have taken on board persons who have resided a longer or shorter time where it has been prevalent, if it breaks out on board, have but few victims, and these during the first days of the

voyage; and if the voyage is long, it dies out and does not re-appear. More often Cholera, properly so called, does not manifest itself. Instances of this are given by the Committee.

In ships having on board a crew and passengers altogether untainted by Choleraic influence, the epidemic, if it appears, develops itself rapidly, and is more extensively fatal than in the former case. It passes through its phases in a short time, and, to a certain point, in a period proportioned in duration to the crowding of those embarked. Instances of this also are related by the Committee.

Although experience shows the difference in what takes place on board those differently circumstanced ships, it is a dangerous error to conclude that the vessels in which the passengers and crews have a certain immunity from the disease, bring no danger with them to the ports of debarkation.

The Conference adopts the answers, *that the intensity of epidemics of Cholera on board ships crowded with men is usually in proportion to the crowding, and, other things being equal, is more violent when those on board do not come from a residence in a centre of Cholera; that in crowded ships the progress of epidemics is generally rapid; lastly, that the danger of importation by ships, and that of giving rise to a severe epidemic, are not altogether dependent on the intensity, or even the occurrence, of Choleraic casualties that have happened during the voyage.*

QUESTION 22nd. — *What influence have assemblages in lazarets, of persons coming from a source of Cholera, on the development of the disease among those in quarantine, and those outside the lazarets?*

The fear that the disease would commit great ravages in a lazaret is not justified by experience. It happens there just as it does in a ship when the inmates have before entry been under a Choleraic influence. They have a kind of immunity from the disease which, in a vast majority of cases, resists the bad effects of crowding. In proof of this the Committee cites instances furnished by Dr. Bartoletti from the progress of the epidemic of 1865.

The records that are furnished by the Committee of the history of the epidemic in the vicinity of lazarets tend to show that a quarantine station brings danger to the neighbourhood.

The Conference adopts the conclusion of the Committee, *that the assemblage in a lazaret of persons coming from a place where Cholera prevails, has not the effect of producing a great increase of disease among those in question; but that such an assemblage notwithstanding, very dangerous to the neighbourhood, as it is to favor the propagation in it of Cholera.*

Moulau declined to vote.

QUESTION 23rd.—*What influence have great assemblages of men, armies, fairs, pilgrimages, on the development and the propagation of Cholera?*

What has been said regarding ships is applicable to all great assemblages of men. When Cholera attacks a body of troops, hitherto untainted by Choleraic influence, it spreads rapidly, and the ravages it commits depend on the sanitary and moral conditions of those attacked. The epidemic runs its course in a short time, although less quickly than in a ship. The epidemic soon dies out, unless new arrivals of troops, as yet untainted, help to revive it. In this case those newly exposed to the Choleraic influence suffer in a proportion much higher than the others who, as would appear, have acquired a relative immunity.

The Committee quotes in support of this, what was observed in the French Army in the Crimean war.

That troops in movement propagate Cholera is well known. The war in Poland in 1831, the Civil war in Portugal in 1833, afford instances of this. During the epidemic of 1847 and 1848 the movements of troops in Russia were often the occasion of bringing the epidemic to places before free from it.

Fairs, like other great assemblages, when Cholera appears, become centres of infection, but, as compared with armies which continue more or less compact, they have the greatly aggravated

evil that the mass affected with Cholera disperses, and spreads it in all directions. The fair of Tuy in Portugal in 1855, that of Samara in the Government of Orenbourg, that of Hurdwar in India, and that of Tantah in Egypt in 1848, are given as examples. The fair of Tantah, which took place this year soon after the epidemic of Cholera, had no bad effect on the public health. This tends to corroborate what has been advanced as to the relative immunity of an assemblage which has already been exposed to an epidemic of Cholera.

The Conference concludes that great assemblages (armies, fairs, pilgrimages) are among the most certain propagating Cholera; that they form great epidemic sources, whether the people march as an army or scatter themselves, as from fairs and pilgrimages, carry the disease into the country they go through; that those assemblages, after having been subjected, in usually a rapid way, to the influence of Cholera, become less susceptible of it, and the disease disappears from among them, it may be even speedily, unless new arrivals come to prolong it.

QUESTION 24th.—*What influence has dispersion on the intensity and the development of epidemics of Cholera?*

It has been already shown that the diffusion of sources of Cholera in healthy localities is almost certain to propagate the disease. But, on the other hand, experience proves that the scattering of an assembly, which has been visited with Cholera, is a measure fitted to lessen the violence of the epidemic, and to lessen the number of attacks in the mass, provided that the dispersion has not been too tardy, and that it has taken place at the first appearance of the disease.

The dispersion in such a case lessens the chances of propagation in all the mass attacked; but it is necessary to bear in mind that most frequently, in consequence of the circumstances in which it is carried out, it only retards the progress of the epidemic. On comparing the results we find that in the scattered mass, when the individuals, although more or less separated from one another,



are always in communication, the mortality has been nearly the same as in a compact mass; only it has been extended over a longer time. It is evident that in many cases the rapid extinction of an epidemic which was committing great ravages in an assembly, has been wrongfully attributed to its dispersion, while the extinction was only the consequence of the natural course of Choleraic epidemics in parallel circumstances.

The scattering, however, when well timed, has undeniably followed by favorable results, and, if it were only to improve every condition of individuals, it could not be too much

The conclusion adopted by the Conference is, *that the opportune dispersion of an assemblage may lessen the violence of an epidemic of Cholera which has appeared in it, and may even prevent its spreading; but that the dispersion would, on the contrary, cause great danger of propagation if it took place in the midst of places as yet free from the disease.*

QUESTION 25th.—*What share has the pilgrimage to Mecca had in the epidemics of Cholera that have followed one after another up to this time?*

The Committee states that, like all pilgrimages, that to Mecca consists of a congregation of new individuals coming from very different countries, and, consequently, in greater part uncontaminated by Choleraic influence, up to the time of their arrival in the Hijaz. This last circumstance usually makes Cholera, if it appears, pass quickly into a violent epidemic, the more destructive because the assembled multitudes are in untoward sanitary and climatic conditions.

The congregating every year at Mecca of fresh individuals, together with the arrival of pilgrims from contaminated countries, accounts for the frequency of epidemics since 1831.

The dispersion of pilgrims after the epidemic has begun, gives rise to danger of its being propagated, a danger that is the greater

from the rapidity with which the dispersion takes place, and from its being in the hot season. Of five epidemics of Cholera that have desolated Egypt since 1831, only two coincide in time the return of the pilgrims, and they were in the hot season of 1858 and 1865.

Twice only, and at thirty-four years' interval, Cholera has been brought to Egypt by pilgrims returning by sea from Mecca, in the interval the disease has many times afflicted Mecca at a time of the pilgrimage; but it is noted by the Committee that the conveyance of pilgrims from Judda to Suez by steam has been practised only since 1858. (This shows that for notwithstanding the steam communication, Egypt did not have an epidemic of Cholera until the eighth year of the use of this rapid means of transport that an epidemic occurred).

The conclusion adopted by the Conference is, *that the part borne by the Mecca pilgrimage as an agent in propagating Cholera in the countries bordering on Europe has been the importation of the disease into Egypt twice, at an interval of thirty-four years, during the hot season.*

QUESTION 26th.—*What influence have the sanitary and other conditions of a locality on the violence of an epidemic of Cholera; in other words, what are the adjuvant causes of Cholera?*

The Committee does not think it necessary to consider at length all the conditions that favor most of the epidemic diseases, but only those that appear to have a particular influence on the development of Cholera.

*Indigence* with all its debilitating consequences as regards food, lodging, dirt, crowding, &c., renders its subjects more liable to most of the epidemic diseases, but to none more so than to Cholera. After indigence come fatigue, excesses that act in like manner in exhausting the organism, and all those morbid conditions that diminish the vital powers, and particularly those that affect the alimentary canal. Cholera attacks in preference persons debilitated, by whatever cause.

*Temperature, Climate*—Although Cholera has not been excluded by any climate, it has been ascertained by observation that, in general, the more or less rapid course of an epidemic, and its more or less invasive progress, are in proportion to the elevation of the temperature. Thus the hot season accelerates, while winter retards, and sometimes arrests, the epidemic.

The Committee mentions exceptions to this, as observed at Moscow and Orenbourg, and in 1830 and 1831 in Russia during winter in Poland, when a very severe winter did not stay the progress of the epidemic.

The Committee suggests explanations of these exceptions.

*Air*—There is no doubt that, in general, confined air, or air vitiated by the exhalations of putrifying animal or vegetable substances, predisposes the organism of man to contract Cholera, and thus to render the disease more destructive. In an epidemic confined air acts, moreover, as a vehicle of the Choleraic principle.

*Water* appears, according to observations made principally in England by Dr. Snow, and in Germany by Dr. Pettenkofer, to contribute, in certain circumstances, to the development of Cholera in a place.

It does so when the water is charged with organic matter, as in rivers that flow through great towns, or in wells which receive the infiltrations of a porous soil, impregnated with decomposing matter, or that are in communication with drains and even privies. The water in this case, as the air in the preceding, serves as a vehicle for the morbid principle.

But according to most German authors, and especially Pettenkofer, privies, drains and the earth itself, are the chief receptacles of the principle of Cholera. The doctrine of Pettenkofer is connected with facts so important as regards prevention that the Committee does not consider itself at liberty to pass it by. The doctrine rests on the proposition, generally admitted, that the alvine dejections of those sick with Cholera contain the principle that propagates the disease. This proposition, already published

by Dr. Pellarin in 1849, who urged the necessity of disinfecting the dejections with sulphate of iron, was corroborated by observations of Dr. Budd in 1854, and by those of Dr. Smith. Then, we may say, it was definitively put beyond doubt by the researches of Pettenkofer. He considers it as demonstrated by his observations, that in an epidemic of Cholera the earth itself of the place where the disease prevails has a great share in its development by the emanations that escape from it. It is that he admits that a porous soil, easily permeable to water, air, and charged with excrementitious matters (consequently alluvial soil, a marshy soil) impregnated with Choleraic becomes at first a receptacle, then, according to circumstances, more or less active, from which the principle of the disease issues, the activity depending on the level of the subsoil waters, and being therefore dependent on alternations, more or less considerable, of the humidity of the superficial layer of soil. This aptness of the soil for receiving the principle of Cholera will explain the tenacity with which the disease clings to certain places, and even its recurrence, apparently spontaneous, after having more or less completely disappeared. It is in India, and particularly in the districts where Cholera is endemic, that the truth of this doctrine will have to be determined. Perhaps it will explain the endemicity. It is a fact well known in India, and of which we find examples in books, that the ground on which soldiers or others affected with Cholera have encamped can transmit the disease.

The Committee adds, whether this doctrine be completely verified or not by all the facts, it appears to be proved that a porous soil, charged with detritus (organic matter), such as is described by Pettenkofer, in short that an alluvial soil, favors the development of epidemics of Cholera; and even if all the epidemics be not explicable by this circumstance, that will not invalidate the rule, but will only prove that other conditions are likewise favorable to the development of Cholera.

The Conference agrees in the conclusion of the Committee *that sanitary and other conditions, which in general predispose a*

population to contract Cholera, and consequently which favor the intensity of epidemics, are indigence with all its consequences, the crowding of individuals, their unhealthy condition, the hot season, the want of ventilation, exhalations from a porous soil impregnated with organic matter, above all if that matter be from Choleraic dejections.

That, as it appears to be shown by experience that the dejections of those with Cholera contain the generating principle of the disease it is legitimate to admit that drains, privies, and the contaminators of a town, may become agents in the propagation of the disease.

That it seems to result from certain facts that the ground of a place once impregnated with Choleraic matters can for a considerable time retain the power of giving off the principle of the disease and of keeping up an epidemic, or even of reproducing it when it has been extinct.

QUESTION 27th.—*What is to be understood of immunity as regards Cholera?*

It is the more necessary to consider this immunity since it has been wrongfully used as an argument against the transmissibility of Cholera, and because it leads to points that are of importance in relation to the prevention of the disease.

There is a like resistance in some to all the most contagious or transmissible diseases, such as plague, yellow fever, small-pox, scarlet fever, &c. A well balanced organism opposes to all those diseases an effectual resistance in a great majority of cases.

The principle of a transmissible disease will not reproduce itself, excepting under certain conditions, and without these it is sterile.

Certain countries or localities have completely or partially resisted the importation of Cholera. Among those in Europe which enjoy this immunity are alpine Switzerland. The Commit-

tee alludes to researches in 1849 by M. Fourcault, and in 1853 by Messrs. Bonbee and Vial, on the influence of certain geological conditions on Cholera, and especially on the repulsive power of granitic soil, from which it was deduced that such a soil was an obstacle to the development of Cholera. This deduction expresses, the Committee thinks, a general fact, but which is far from being without exceptions. The same may be said of great altitude.

Many towns in Europe have resisted more or less the Choleraic influence, but Lyons merits special mention. This town, with a population of four hundred thousand, seems at first to combine all the conditions that are favorable to an epidemic of Cholera. Situated on the confluence of two rivers, although on one side built on high ground, yet on the other standing on alluvial soil, it has crowds of workmen; the causes of insalubrity and indigence are not wanting; it is on the great thoroughfare from the north to the south of France, and has been a refuge for many fugitives from places where Cholera was prevalent. Yet Lyons has hitherto resisted more or less the Choleraic influence.

The resistance of individuals to Choleraic poisoning is in some cases complete. The resistance in others may be but temporary, as is observed among medical men, who, over-excited by the sentiment of duty, resist the greatest strength of the disease, but succumb perhaps at the decline of the epidemic when exhausted by fatigue. The past never guarantees a future immunity. The immunity is in proportion to the vital resistance, and this is variable.

It has been observed that in epidemics very strong persons have been stricken beside individuals apparently very feeble, who have been spared. But it is well known that vital power is not in proportion to muscular energy.

Besides the more or less complete immunity proper to every individual, there is also a temporary immunity which a recent subdued epidemic leaves after it.

The Conference adopts the conclusion *that the immunity which certain localities enjoy, that is to say, the resistance, perman-*

ent or temporary, general or partial, opposed by those localities to the development of Cholera within their bounds, is a fact which does not preclude transmissibility, but which indicates that certain places, the set all determined, are an obstacle to the development of the disease. That the more or less complete, and the more or less durable immunity which the greater number of persons placed in a malarial centre enjoy, an immunity that attests the individual's insusceptibility to the poison, is a circumstance which should be held to be of the greatest value.

Regarding it with reference to epidemic development, it is correct in transmissibility, and, as regards prevention, it puts on the way, means fitted to restrain the ravages of the disease.

QUESTION 28th.—From the facts previously established, and which are connected with the generation, the propagation and the transmissibility of Cholera, can we deduce any thing precise as to the generating principle of the disease, or, at least, as to the mediums which serve as vehicles, or receptacles; as to the conditions of its entrance into the organism; as to the ways by which it escapes from it; as to the duration of its morbid activity; in short, as to all the properties a knowledge of which concern prophylaxis?

Although the generating principle of Cholera be called *contagium*, germ, miasm, and whether it be, or be not, considered an organised substance, it has always escaped observation, it has never been isolated, and it is known to us only by its effects. In this respect it does not differ from other morbid principles. What we do know is that it reproduces itself in man.

In Europe it has never been seen to begin otherwise; it is by successive generations within man that it multiplies and propagates itself; never does the nature of the soil, nor the worst sanitary condition, give birth to it. But at its source in India, where

it is endemic, is this the case? Has the morbid principle its birth there spontaneously, and out of man, under conditions still unknown, and which exist nowhere else? Or, in applying the doctrine of Pettenkofer, is the soil of the places where the endemics prevails merely the receptacle of the germs, and has it the property of preserving them long enough to allow of an incessant disengagement more or less active? Does it never exhaust them before they are renewed? What has been said of the clinging of Cholera to certain localities in Europe gives some support to this hypothesis.

The principle of Cholera seems indigenous in the Ganges, and it is principally there that on an alluvial soil, low and humid, it now maintains an endemic form. Are we authorised to conclude that Cholera has a miasmatic origin, and is only a form of palustral disease produced by the marshes of the Ganges? The Committee thinks it is not so. Observation shows that there is no proportion on the banks of the Ganges between the intensity of marsh endemics and that of endemic Cholera; each has its own characteristics, and they have there their maximum of intensity at different seasons of the year. There is another fundamental character which separates Cholera from marsh diseases; it is that the latter commit their ravages on the spot, and the principle which produces them does not reproduce itself within man, and consequently is not susceptible of transmission.

The conclusion as adopted by the Conference is, *that in the present state of science we can announce only hypotheses as to the nature of the generating principle of Cholera; we know only that it is indigenous in certain countries of India, and that it maintains itself there permanently; that the principle reproduces itself within man, and accompanies him in his peregrinations; that it may thus be diffused to a distance from country to country, by its successive reproduction, without ever generating itself spontaneously, apart from man.*

The votes were unanimous. Dr. Goodeve declined to vote.



QUESTION 29th.—*What are the vehicles of the generating principle of Cholera?*

The Committee in using the word vehicles, means the agents which are the mediums by which the morbid principle penetrates into the organism. Facts show that the air is the chief vehicle. The rapid dissemination of the disease in an affected locality, the simultaneous attacks of a large number in a given assemblage, the contact, either mediate or immediate, with the sick is impossible, the general influence which at the time of an epidemic weighs less on individuals placed within the limits of the source, circumstances, added to the facts which show that persons taken with Cholera at a little distance from a centre with which they had no communication, the Committee thinks, prove that the ambient air is the principal vehicle of Cholera. The principle of Cholera must then be volatile, and behave in this respect as miasms do, that is to say, by infecting the atmosphere. Observations show, however, that the Choleraic principle cannot be carried far by the atmosphere. It seems as if the power of the Choleraic miasm, like that of the miasm of typhus, were rapidly exhausted in free air at a short distance from its source.

QUESTION 30th.—*To what distance from a centre of emission can the principle of Cholera be carried by the air?*

It acts but rarely beyond a very short distance; the Committee says a hundred *metres*, approximately, (328 English feet), but that in the immense majority of cases the transmission does not take place, excepting at a much shorter distance. But are there any observations that lead to the conclusion that it can act much farther than that from the centre of emission? The occurrences that have been offered in proof of this can be otherwise explained, or they are wanting in important details. In discussing the report Dr. Goodeve wished that it should not be specified that "in the immense majority of cases" the distance at which transmission by the atmosphere can take place is very near the centre.

The Conference adopts the following answers to questions 29 and 30—*The ambient air is the chief vehicle of the generating agent*

*of Cholera; but the transmission of the disease by the atmosphere in an immense majority of cases, is limited to a distance very close to the centre of emission. The instances cited of transport by atmosphere to one or many miles distance are not sufficiently conclusive.*

The votes were unanimous. Drs. Sawas and Goodeve declined to vote.

QUESTION 31st.—*What are the other vehicles of the Choleraic principle?*

The observations in England seem to place it beyond doubt that water, whether defiled by Choleraic dejections, or contaminated by the morbid agent diffused in the atmosphere, may serve for the introduction of this agent into the organism.

It is reasonable to admit, although proofs cannot be shown by the Committee in support of it, that certain alimentary substances may become vehicles of the morbid principle.

The Conference unanimously, and all voting, adopted the conclusion, *that water and certain ingesta may serve as vehicles for the introduction of the generating principle of Cholera into the organism, that the ways by which the poisonous agent penetrates are chiefly the respiratory, and very probably also the alimentary, passages. Nothing has been ascertained as to entrance by the skin.*

QUESTION 32nd.—*What are the chief receptacles of the Choleraic principle?*

It is in the digestive tube that the generation of the morbid agent appears to be accomplished. Whether it be so or not, it is certain that the matters coming from the alimentary canal of a person with Cholera contain it.

According to the researches of Pettenkofer and of Thiersch, it would appear that the morbid principle exists only in a latent state in fresh Choleraic dejections, and that it is necessary that a

certain degree of fermentation should take place in them for the development of their poisonous power, and for the disengagement of the morbid principle. From this theory it follows that what favors the fermentation of the dejections without destroying them tends to preserve the germ of Cholera, which might subsequently be developed under favorable circumstances.

It is incontestable that the dejections are the first receptacle of the morbid principle, and that then linen, clothing, in short, what can be soiled by the dejections, and privies, drains, waters, and the soil of a place may become secondary receptacles, from which the morbid principle may be set free more or less quickly, and less energetically, according to circumstances.

The Conference concludes *that Choleraic dejections being incontestably the chief receptacle of the morbid agent, it follows that all that is contaminated with those dejections also becomes a receptacle whence the generating principle of Cholera may be set free under favoring circumstances. It follows also that the generation of the Choleraic germ most probably takes place in the alimentary canal, to the exclusion, perhaps, of any other part of the organism.*

The voters were unanimous: all voted.

QUESTION 33rd.—*What is the duration of the morbid activity of the generating principle of Cholera?*

According to the Committee, it results from observation that in free air the generating principle of Cholera rapidly loses its morbid power, but in certain peculiar circumstances of confinement the principle may retain its activity during an indefinite time.

There is yet a question as to how long the morbid principle may be reproduced and eliminated by the organism of the sick, or, in other words, how long an individual, with premonitory Diarrhœa, or confirmed Cholera, can transmit the disease? This question,

with which the duration of sequestration in quarantine is connected, is difficult to answer, and it was much debated by the Committee.

The opinion that the infectious Diarrhœa, in certain cases, may be prolonged for many weeks was urged with much force. In opposition it was held that the premonitory Diarrhœa lasts, in general, scarcely more than three days, and if it did continue, it was very rarely that it exceeded a week, and that we may, for all safety, consider as free from Cholera a person isolated from the cause of the contagion whose Diarrhœa is prolonged beyond a few days after his segregation, without his having presented any characteristic sign of the disease.

The Conference by a majority adopted the conclusion, *that observation shows that the duration of Choleraic Diarrhœa, called premonitory (which it is necessary not to confound with Diarrhœas that exists in times of Cholera), does not exceed a few days. The observations cited as exceptional do not prove that the cases of Diarrhœa which last longer are Choleraic, and are capable of transmitting the disease when the individual has been removed from all cause of contamination.* Fourteen voted in favor, and Drs. Gomez, Millingen, Mühlig and Salvatori, voted against it. Dr. Monlau refrained from voting.

#### NOTE.

The Conference deemed it useful to attach to the report a complete view of the doctrine of M. Pettenkofer, as given by Dr. Mühlig :

“ The researches of Pettenkofer do not refer to the quality of the soil considered as a receptacle of the principle of Cholera. Pettenkofer had established, what had before been advanced by others, that the quality of the soil of a locality is among the adjuvant causes of Cholera, the most powerful ; only he went much further, inasmuch as that he asserts that a soil possessing the qualities that he describes is so essential to the development of Cholera that the Choleraic germ imported into a place the soil of which has opposite qualities will be perfectly innocuous.

“ The soil that is favorable to the development of Cholera is, according to Pettenkofer, porous, easily permeable to water and air, charged with organic matter (above all excrementitious), and presents from time to time a difference in the level of the

subsoil waters. But the time when the subsoil waters subside, and in consequence a certain relative dryness succeeds to an unusual humidity, will, according to him, be the most favorable for the development of Cholera.

Thus Pettenkofer concludes that two elements are indispensable to the development of Cholera: first, the importation of the Choleraic germ into the place; second, a soil particularly constituted. Neither the former nor the latter of these elements suffices alone; both together are required: the person suffering under Cholera furnish the germ, the soil will furnish certain emanations which, in combination either it be in the atmospheric medium, or whether it be in the organism itself, produce the Choleraic infection."

## PREVENTION OF CHOLERA.

THIS part of the work of the International Sanitary Conference comprises the THIRD GROUP OF QUESTIONS, and it was entrusted to three Committees, who had to report severally on—first, the sanitary measures; second, the quarantine; and third, the special measures necessary to be taken in the East to prevent new invasions of Cholera in Europe. In discussing and reporting on the subject of this group of questions, the Committees did not implicitly follow the scheme that was originally sketched, but were guided by a revised classification that, after much disputation, was adopted by the Conference at its thirteenth meeting.

# ABSTRACT OF THE REPORT

## ON THE

# SANITARY MEASURES

### TO BE TAKEN FOR THE

## PREVENTION OF CHOLERA.

THE Committee was composed of M. Segovia (President), Dr. Gomez, Dr. Goodeve, M. Keun, Dr. Lenz (Secretary), M. Malcom-khan, Dr. Millingen, Dr. Mühlrig, Dr. Spadaro, M. Vetsera, Dr. Monlau (Reporter). The Report was dated the 6th August 1866.

The Report, after preliminary remarks on the high importance of sanitary art, shows the order in which the measures of prevention are considered. The objects in view being to extinguish, as may be possible, the generating sources of Cholera, to hinder the importation of the disease—to destroy the predisposition of places to receive it—to lessen its ravages when, notwithstanding all precautions, it has entered a place—these ends are to be attained by the sanitary means that are proposed.

### I. — *The sanitary measures to be taken in places reputed to be permanent sources of Cholera.*

To trace the evil to its source, to disclose its extent, to combat it, with energy until it is completely extinguished, is evidently to prevent for ever its return. For this reason the first question is—Are there any preventive measures by which the original sources of Cholera in India might be extinguished?

The Committee explains the acceptation in which it uses the term *original source*. Every place in which Cholera is permanently established is held to be an *original source*, or centre, without requiring if the permanence is due to natural conditions of soil and climate, or to artificial conditions created by man himself; to natural and continual causes of generation, or simply to transmissions followed by the disease.

By this way of viewing the sources of Cholera all search for *special* means is rendered unnecessary, and it is requisite to consider only those known hygienic measures that are everywhere efficacious in pestilential diseases, and consequently in India to inquire to what extent those measures are applicable, already been applied in India, and the results that it is reasonable to expect from them.

The Committee expresses its high appreciation of the information it received from one so competent to give it as Dr. Goodeve as to the difficulties, on one hand, which present themselves in India to the introduction of sanitary measures on a great scale, difficulties arising from the extent of the country, the conditions of the soil, the number of the people, and their intellectual state; on the other hand, as to the extension which the solicitude of the English Government had already given to those measures.

The report gives a simple enumeration of sanitary measures already effected, or in progress, in India, and mentions the permanent Sanitary Commissions of the three Presidencies and their duties—the works at the Presidency Towns—At Calcutta a system of drainage which is under construction, and a scheme of water supply which has been sanctioned; the clearing of the old drains; the improvement of the public latrines and the construction of a railway to carry the filth to a distance; the removal from the town of noxious trades; the prospective construction of a slaughter-house, and the prohibition of throwing the dead into the river—At Bombay, without noticing many other improvements already long realized, a more complete system of scavenging; the removal of the Fort walls; the preparation of an Act to regulate the height of houses; and the ventilation and occupation of houses. (Had fuller



information been furnished from Bombay the Report might have noticed the extensive reclamation of foul foreshore, the system of drainage which has been begun, the railway to carry out of the town the daily filth, new markets and a projected slaughter-house, hospital visitation, limewashing, and disinfection in epidemic sickness.) In Madras there were a water supply and system of drainage in contemplation.

In addition to what is noted regarding the capital towns, improvements in other towns are alluded to. The measures for the improvement of the health of the troops and cantonments are enumerated.

The Report states that the doctrine of the transmissibility of Cholera not having been recognized in India, as elsewhere, until lately, it is only recently, or since the report of the Cholera Commission of 1861, that sanitary measures have been based on it. It was not until later that the danger from Hindoo pilgrimages was seriously noticed. The frequent importation of the disease into Madras by pilgrims returning from Conjeveram, Tripetty, Trivelore, &c., is quoted from an Annual Report on deaths in Madras. (The Committee, misreading the Returns forwarded to the Conference from Bombay, gives undue credit to sanitary measures, which are supposed to have been successful in warding off visitations of Cholera in the year 1865 from all but two out of ninety-four assemblages of pilgrims in this Presidency.)

The measures to be taken to avoid the dangers of pilgrimage are of two kinds:—first, to hinder the development of Cholera at the places during the concourse of pilgrims; second, to hinder the propagation of the disease by pilgrims on their way back.

With reference to the first of these, mention is made of what had been done at Conjeveram and at some places in the Bombay Presidency. And with reference to the second, the rules proposed by the President of the Sanitary Commission for Bombay, and printed in the Report for 1864, are quoted.

The Committee remarks that the regulating of pilgrimages has to encounter great difficulties when being put in practice, as it is not yet definitively settled. It must be hoped that the arrangements will every year be modified as experience may show it useful and necessary.

No one, on examining narrowly all the sanitary measures that are being carried out in India, can deny the great and salutary influence that they must necessarily have on the intensity of epidemic in general, and especially on Cholera, in lessening the predilection to infection, and in removing many of the adjuvants of the disease.

As these sanitary measures alone will not suffice to extinguish Cholera at an early period, it is meanwhile necessary to guard against its importation, and to oppose effectual obstacles to it. It is very obvious that restrictive measures are indispensable, and that they will continue to be so for a long while.

The Committee hopes that all the Governments that have possessions in India will, for the same humane end, apply in their respective territories, according to their local wants, sanitary measures like those adopted in British India.

In acknowledging and appreciating all the advantages, in part already attained, and in a higher degree yet to be attained, from sanitary measures in India, the Committee concludes that there are no direct means of extinguishing epidemic Cholera at its sources, but it may be hoped that this will be arrived at by measures among which the sanitary will perform the most important part.

The Committee hopes also that the Government of Great Britain will pursue, and even extend, the path of reform, on which it has entered with so much promise; but recommends, above all, that coercive measures be not renounced. The transmissibility of Cholera being admitted, and the slow working of hygienic measures being known, restriction and isolation will be indispensable for a long while to come, at first to hinder importation, which is

always imminent, and then to leave time for sanitary measures to produce their effects.

## II.—*Sanitary measures to hinder, as far as possible, the importation of Cholera by sea.*

After having hindered, as much as possible, the production of evil, it is necessary, as long as it will reproduce itself, to bar its passage and prevent its importation, especially by sea, which while the most dangerous way of communication, yet is also that allows of the most effective precautions.

much has been done in ameliorating the condition of sailors. In the British Navy the mortality, which sixty years ago is said to have been from 91 to 125 in a thousand, is now but 11.8. Much, however, remains to be done.

The Committee limits itself to a rapid enumeration of the chief of the measures that should be taken on board ship.

First, a ship should be considered as a habitation, and as—eventually—a receptacle of morbid germs. Naval hygiesis begins at the stocks. It is necessary to consider what improvements may be introduced in the seasoning of the wood, and the preparation of the timbers and planks to be used in building; the tightness of the hull, the size of the hatches, the positions of the bulkheads and the ports, with all that is connected with the circulation and renewal of the air, the cleanness of the hold and the bilge, the victualling, the preparation and preservation of provisions, the material and make of the clothing of the crew, &c. &c. Governments and Maritime powers should give prizes and honors for inventions that promote the salubrity of ships and the health of crews and passengers.

When the ship is ready to sail its condition should be carefully ascertained, and especially if proceeding on a long voyage. The Master should be required to remedy any evils pointed out by authority. The insalubrity of many old ships is notorious, and the Official Agent should have power to prevent the sailing of such as

are in a condition that renders them likely to produce fever, dysentery, or other diseases.

The condition of the cargo also deserves attention. shipping of damp substances, or such as have been recently wet with the rain, should be forbidden. Large timber, or planks, taken out of rivers, or marshes, should be washed and dried as well as possible before being taken on board. Goods and raw material, especially organic substances, if they are soiled, damaged, decomposed, should not be allowed to be shipped.

Precaution is required as regards the nature of food and the mode of stowage. And much attention should be given to the clothing of the sailors, and the condition of their berths and hammocks.

Before the departure of the ship enquiry should be made as to the quantity and quality of the provisions and beverages, and the drinking water should be attended to, especially when Cholera is prevalent. Always, but particularly then, the shipping of muddy or impure water should be prevented. It would be necessary, even in ordinary times, to forbid watering at certain streams, rivers, or springs, of doubtful salubrity.

The number of the sailors should be in proportion to the tonnage and to the length of the voyage. The health of the crew should be ascertained by strict examination by a medical man. It is also of great importance that the health of the passengers, so far as possible, should be ascertained, and that their number should be in proportion to the tonnage, the capacity of the cabins, the number of beds, mattresses, blankets, the length of the voyage, &c.

Crowding is the great evil in ships, especially in times of Cholera. The Committee has no hesitation in recommending that there should be rules to fix the maximum numbers of passengers to be carried. The cupidity of Transport Companies and Masters of Merchantmen should be resolutely checked, as they are always eager to take on board passengers, and to crowd the cabins, and even the decks of their ships, contrary to the first principles of life and health.

The cubage of air is often insufficient in ships, especially at night; and ventilation is not always perfect. - When to these two medical causes of unwholesomeness are added the crowding, the gelling products of the respiration and the perspiration of so many men, the evaporation from wet clothes, the effluvia from hammocks and cots, from soiled linen, from the sick, &c., it is not difficult to foresee the troublesome results. Such continued miasm is one of the auxiliary causes of every kind of ill.

The transport of living animals claims attention. Apart from the stability of Cholera by them, a question which the Conference refrained from answering, it is necessary carefully to avoid the poisoning of the air by the over-crowding of cattle on board, and to spare those at the ports of debarkation from the revolting sight of the landing of a great number of animals in a state of asphyxia. The Committee calls the attention of the sanitary authorities to the necessity of having a physician, or a surgeon, on board regular passenger ships, or those whose crew is of a certain number. The presence of a medical man is always a benefit to those on board, and when it is viewed as a guarantee against the importation of Cholera, as a source of information, and, above all, as mitigating the quarantine, it is a question that deserves mature consideration.

The sanitary service on board merchant ships should be regulated by the Government of the country.

All ships should be required to be provided with a medicine chest containing the common medicines and the most necessary surgical apparatus. The sanitary authority should make out the catalogue of medicines, and prepare a Manual of Medical Instructions for guidance, and it should be obligatory to have these and an abundant supply of disinfectants on board every ship before its departure.

All or most of these measures are well known, and even obligatory, in many countries, and it is very desirable that they should be made obligatory in all.

*On the voyage* the sanitary arrangements are but the continuation of those that were applicable at departure.

Scrupulous cleanliness of the ship, the sailors' berths and passengers' cabins, cannot be too much urged. The hold transforms a ship into a floating marsh on the least neglect to maintain in a wholesome condition this troublesome part of the vessel. This wholesome condition may be best maintained by means of a methodical stowage, by the good preservation of the cargo stores, by constant ventilation, and by the frequent removal of water in the hold. It is necessary to pump out frequently the bilge water, to prevent, as much as possible, the collection of black mud that is deposited at the bottom of the hold, to infect this part of the ship when ventilation and the addition of clean water is insufficient to render this perpetual source of unhealthiness inoffensive.

The insufficient airing, the difficult access for the sun's rays to the interior of the ship, and the resulting humidity, are evils that it is necessary to combat by constant ventilation, by well arranged openings of sufficient size, and by ventilation by mechanical means. The double action ventilator of M. Peyre deserves particular mention.

In fine weather the exposure of the clothing and bedding in the air and sunshine should not be neglected on any pretext. Personal cleanliness should be enforced among the sailors, and they should not be allowed to sleep in wet clothes.

In ships from a port infected with Cholera the least amount of Diarrhoea, the least derangement of the digestive organs, should be particularly attended to. Those with suspicious symptoms should be kept separate, and disinfectants should be used.

*On arrival* the sanitary observances will embrace precautions connected with the condition of the persons on board and of the ship.

All ships before being allowed free communication should be visited, in order that their condition may be carefully investigated,

and that it may be known how the sanitary police has been attended to during the voyage.

In ordinary times a well kept ship need not be submitted to any regulations, but in time of epidemic sickness the sanitary authority of the port will have to decide if it be necessary to resort to sanitary measures.

It should be noted that sanitary arrangements at departure and arrival are more particularly the office of the Administration, those for the voyage devolve on the Masters, or those employed on board ships. A *Guide or Manual* of sanitary instruction should be compiled, and an abridgement of it should be prepared for coasting vessels.

A Statistical Return of the Merchant Marine of every country, with the numbers sick and the deaths during the year, would be an excellent means of knowing the real results of earnest sanitary practice and of noting its progress. What is now recommended by the Committee for adoption is nearly in accordance with what is in practice in Great Britain.

The Committee would advise.—

1st.—*To have meetings, and to give prizes for discoveries or improvements, the immediate result of which should be some advance in the sanitary improvement of ships; and in the amelioration of the hygienic condition of the crews, or in the well-being of the passengers.*

2nd.—*To publish a Sanitary Manual for the use of the Merchant Marine of each country. The carrying out of the most important rules in the Manual should be obligatory.*

3rd.—*To encourage by prizes and rewards those who have distinguished themselves in the good management of their ships and their crews.*

### III.—*Sanitary measures to lessen the chances of reception of the disease in ports.*

To defile the pure water of rivers with filth, to cover the clean ground of anchorages with excrement and transform the basins of our ports into *cloacæ*, is always a kind of profanation, an act of barbarism, an outrage against health. It is too common, indeed, to choose the basin of sea ports as the receptacle for the ordure of the town. A visit to one of those ports at low tide, or at the approach of a gale, or during a fog, will convince, by the offensive emanations from the enormous bed of slime and mud, how pernicious it must be to those who respire it. It is evident that the hotter the climate the more deleterious will be the influence.

We know that ships naturally defile the waters of the basin with ashes, dejections and other filth, and that it becomes necessary to clear the basin at intervals by dredging. But it is deplorable to see added to this evil that which comes from the drains and latrines of the town. Arrivals from an infected place find in those ports a soil eminently propitious to the development of morbid germs, and it is not astonishing that Cholera should be so quickly transmitted in sea coast towns, and that it should there propagate itself so destructively.

The business of great ports requires workmen for the repairing of vessels and for making cordage and sails, and men to load and discharge the ships and carry loads; these, and the fishermen and the invalid or unemployed seamen, live naturally as near as possible to the port, and make a kind of marine quarter close to the town. This quarter is far from fulfilling sanitary requirements. Liquor shops, filthy taverns, offensive apartments, vice and indigence, have a prominent place; this population is in constant communication with the ships in the harbour, and it is in it that almost always the first cases of Cholera appear. Isolation would be the best safeguard for the town, but the difficulties of such a measure are generally very great, almost insurmountable. It is, therefore, a matter of urgency for self-defence to employ a strict sanitary police. In England and in Holland there are asylums for sailors, called *Sailor's*



Homes, which, the Committee thinks, deserve to be imitated in all great ports.

The Committee concludes as follows:—

*The sanitary conservation of ports, with prohibition against the sewers of the town being made to discharge into them, periodic dredging, and a good interior sanitary police, are measures of highest importance for preservation from transmissible diseases in general, from Cholera in particular.*

*The sanitary conservation of the quarters close to sea ports, and sanitary police in them, are also very important measures.*

#### IV.—*Sanitary measures to lessen the predisposition of places to the reception of Cholera.*

This might include the whole of hygiène, but the Committee limits itself to the consideration of the three most important points—*air, water, and earth.*

*The air*—It may be vitiated from its insufficiency for the number of persons who breathe it. This is the case in the deleterious over-crowding of the houses of the indigent. If Commissions and Associations, like those in Paris and London, that interest themselves in the improvement of the dwellings of the indigent classes, were instituted in every town, they would render very great service to the public health.

In many great cities in Europe special houses are being beneficently constructed for workmen.

Stagnation of the air is also one of the chief causes of its vitiation. The same cubage of air might, without inconvenience, serve for a greater number of individuals if it were continually renewed. Hence the importance of an abundant ventilation, as well for dwellings as for a whole town, because streets too narrow and crooked, or courts too small and enclosed with high houses, extend to a whole population the hurtful influence experienced by individuals in ill ventilated apartments. This influence is manifested especially

during Cholera, of which the air is the chief vehicle, because the air when slowly and insufficiently renewed, can communicate the disease to many more persons than it could if continually agitated by the wind.

A third source of deterioration of the air is the direct mixing with it of deleterious gases, and, above all, of those resulting from the decomposition of organic matters.

*Water*—What is important to show is the influence of pure water as a predisposing cause, and of water contaminated with the Choleraic germ as a direct cause of the development of the propagation of Cholera, if this influence is not already generally admitted. The Committee relates examples in proof of this proposition taken from reported experience in England.

Water may be contaminated by infiltration through the soil into wells and cisterns, or by the direct introduction of organic matters, as in the case of rivers. The indications are to keep all reservoirs of drinking water at a distance from privies, stables, &c., to prevent the waters of brooks or rivers which supply towns from being defiled.

When, from constraint, impure water must be used, it should be first purified by boiling and filtering through charcoal, or by other means.

*Earth*—The soil of most towns is but a vast receptacle of excrement of all kinds to a degree of which few have an adequate idea, and the continual decomposition of those matters contaminates the air and water. To hinder the soil being rendered impure will, therefore, be one of the chief points in the sanitary conservation of towns.

Pettenkofer has calculated that the excrements of a hundred thousand inhabitants of a town annually impregnate the soil with an amount of putrescible matter equal to what would result from the decomposition of fifty thousand corpses interred every year in the same place, that is to say, around the houses.

It is easy to deduce from this that all excrementitious matter man and beast should be immediately removed to a distance from inhabited places. In small villages and in certain quarters of a town unprovided with public latrines, the excrements are deposited directly on the ground. In certain great cities, which might be expected to be under Police rule, open drains and absorbent pits testify to the little advance that has been made in sanitary administration.

In most towns the systems of latrines adopted are cess-pits, or moveable vessels.

The impregnation of the soil by the use of cess-pits is exceedingly great when they are not built with cement, and even those that are cemented are not altogether impermeable. Hirsch relates that six months after the construction of a well cemented cess-pit, putrid organic matter was found in a well ten feet distant in such quantity as to prevent the water being longer used.

The drainage and water-closets, such as are used in England, may cause evils by their discharge into harbours, or into rivers. There is the additional danger that a great number of privies establish a direct communication between the sewer and the inhabited apartments of different houses. The dejections of one person with Cholera thrown into the sewer would suffice to poison many houses by the gas rising through the water-closet, and carrying with it the Choleraic principle into the apartment. Dwelling rooms, and especially bed-rooms, should be beyond all contamination from water-closets communicating with a common sewer.

The Committee does not enter into an appreciation, in all its details, of the improvement in drainage carried out in some towns in Scotland, and projected for London, which tends, on one hand, to preserve the rivers from contamination, and, on the other, to utilise the excrementitious matters in fertilising the fields. The cost is enormous, while local circumstances, such as the situation of a town in a hollow, insufficiency of water, great cold in winter, may render it impossible, and a certain impregnation of the soil by the excrementitious matters cannot be avoided.

The moveable vessels (with or without the separation of liquids and the immediate deodorization of the contents) are coming into more extensive use in many towns in France, Belgium, Germany and England. This system conjoins the best sanitary conditions at little cost, and without any loss of fertilising matter for the fields. As this system requires the removal of the excreta more or less immediately, its success depends on a well regulated system of removal and the choice of a place of deposit outside the town. The Committee recommends that a manufactory of manure should be annexed to the place of deposit.

Sometimes, in order to repress an epidemic of Cholera at its beginning, a general emptying of latrines and a clearing up of streets are resorted to, although this rather favors the propagation of the disease. In time of epidemic sickness it is dangerous even to raise the pavement, or in any other way to break up the ground in a town.

A system of gutters, well lined and cemented, should carry off the rain waters, so that they may not sink into the ground, and by a system of subsoil drainage the ground should be dried.

It is necessary to place the cemeteries at some distance beyond the suburbs of towns. The graves should not be less than six feet deep.

In times of Cholera it would be well to remove the corpse from the house as soon as possible, and it should be interred within twenty-four hours after death; it should not be washed, and it should be put into a well pitched coffin with the body and bed linen, but without any other clothes, and covered with quick lime before closing the coffin; this also, when laid in the grave, should be covered with lime. The removal of corpses to a place as yet free from Cholera should be interdicted.

The conclusion of the Committee is—

*The sanitary conservancy of towns is an efficacious means of opposing the reception of Cholera and of lessening its ravages.*

*This conservancy should be based chiefly on a combination of measures tending to maintain the purity of the air, to supply the towns with abundance of wholesome water, and to hinder the contamination of the ground with organic matters.*

*The immediate disinfection and the removal of excrementitious matters are sanitary measures of the highest importance, especially in cases of Cholera.*

*—Sanitary measures to check, as much as possible, the propagation of Cholera in the interior of the country.*

As the measures of prevention have, for some reason, failed, and an invasion of the disease has already taken place, it yet remains to endeavour in the first place to lessen the number of victims, and in the next to render the attacks less fatal.

In following the first of those indications there should be house visitation, in order to watch over the salubrity of dwellings and the health of the individual occupants. The favourable results in London, Dumfries, Glasgow, Munich, where this was carried out, are alluded to by the Committee. The adoption of the system is strongly recommended as *preventive*, but, like all other measures, it should be opportune, complete and conscientious. Copies of popular instructions, containing precepts regarding the prevention, and the first cares to the sick in cases of attack, should be distributed profusely and gratuitously.

The depressing effect of fear is known, and it is well to raise the spirits of the people by all possible means. A question has been raised as to whether in an epidemic visitation it is preferable to conceal the danger, to understate the real numbers of attacks and deaths, or freely to confess the imminence, or the extent, whichever it may be, of the ravages of the disease. The Committee declares for complete veracity. This prevents the abandonment of precautions on the part of individuals, and it prevents also the exaggeration to which the public is but too much inclined. The contrary system most often produces only an effect diametrically opposite to what was intended.

If the general preventive house visitation has been omitted, immediate visits should be paid, at least, to houses attacked. It is then that medical care, and isolation and disinfection, can be most successful.

There should also be hospital aid. Every large town should have a permanent hospital for epidemic diseases. This hospital should be outside the town, and should receive the first attack by any epidemic, whom, at present, it is too often necessary to take into the ordinary hospitals before there has been time to clear them of their sick. For those who cannot bear to be taken to the hospital outside, it may be necessary to have temporary hospitals in the town, in hired or other houses. Houses adjoining them should be vacated.

If ever taken into general hospitals, the sufferers with Cholera should be in separate wards. The conveyance of the sick should be in vehicles exclusively appropriated for the purpose, and they should be stationed at the chief crossways.

The common latrines in hospitals should be closed; special vessels should be used for the dejections. These should be disinfected at once and carried away twice a day in well closed receptacles, to be taken to a distance, buried in trenches and covered with quick lime. The soiled linen of the hospital should be immediately steeped in water containing some disinfectant. Straw beds are preferable to mattresses, and the straw should be burnt after it has been used for one sick person.

It is equally necessary to disinfect at once the linen and clothing brought with those admitted into hospital. If the resources are abundant it would be preferable to burn all the effects of the sick: this will be applicable at least to the clothing of the deceased.

Nurses should be chosen, if possible, from among those who have already suffered from Cholera, and they should be in sufficient numbers to be able to afford them frequent reliefs, and give them hours for repose, which they should pass out of the hospital. The strictest cleanliness should be enforced among them.

The conclusion of the Committee is, *that the judicious organisation of public assistance, general house visitation for prevention, or, in default of it, medical visits and immediate succour to the attacked, the publication of popular instructions, the encouragement that arises from confidence in the promptitude and extent of the succour, and the publication of the true state of the epidemic, the opening of special hospitals and of houses of temporary refuge for the families of the sick poor, are sanitary and administrative measures very efficacious for impeding the propagation of cholera, and for lessening its ravages in places invaded by it.*

Temporary interruption of all communication with the place, or persons attacked by Cholera is the preventive measure that is the most sure, most simple, and the first suggested by the instinct of self-preservation. But it is not easy to carry it out. It may be applied to an island, a peninsula of small extent, to a restricted locality, to a quarter, or to a particular house, but it becomes impracticable when it comes to be generalized. The Committee, however, recommends it in all cases where it can be effected.

Dissemination, in the acceptance of a dispersion of seeds or germs of Cholera, by great moving assemblages, which has already been considered, is an evil for those places yet free from the disease; but as regards the assemblage or concourse attacked, or threatened with attack, a scattering or segregation of the individuals is an important means of prevention. The moving assemblage must derive advantage from well directed change of place which betters their sanitary condition, and from the methodical segregation which diminishes, besides, the chances of transmission.

The change of place and scattering appear to have had very favorable results in times of epidemic sickness on the sanitary condition of troops where it has been tried. In the Indian Military Stations are found the most remarkable instances of this.

The Committee records the following:—

*Temporary interruption of communication with infected places, provided it is absolute, is the most sure preventive of the transmission of Cholera.*

*The opportune change of place, and the methodical segregation of moving assemblages (caravans, bodies of troops, &c.) are very efficacious measures to prevent the breaking out of Cholera among them, as well as to check its extension and to mitigate violence.*

*Opportune emigration and well regulated separation may give favorable results in fixed masses (public Establishments,*

VI.—*Sanitary measures to prevent and extinguish Cholera at its centres of infection by destroying in them, and in contaminated substances, the germs of the*

The infecting principle of Cholera is as little known as the rest of the specific germs, but experience having taught that the air is its chief vehicle, that it acts only at short distances from its centres of emission, and that it often adheres to certain bodies, we may try to destroy, to weaken it, to drive it away by various means.

We do not always know very exactly what takes place during our disinfecting processes, but we obtain effects which lead us to believe that we have destroyed the Choleraic miasm, or neutralized its deleterious action.

A special treatise on disinfectants by M. Mühlig, one of the Committee, is appended to its report.

It is noted by the Committee that immediate disinfection in time of Cholera is of supreme importance.

Experience teaches that it is possible to extinguish Cholera, provided its centres are yet few, and that their complete isolation comes in aid of disinfection. In applying the disinfectants it should be to the dejections of the sufferer, the linen, &c., then to the apartment he inhabited with all it contains, and lastly to the house.



The Committee admits that *disinfection applied to Cholera in a rational method and with perseverance is a powerful auxiliary:—*

1.—*To diminish in a place threatened with Cholera its predisposition to receive it.*

2.—*To destroy the germ of the disease imported into a locality.*

3.—*To limit in certain favorable circumstances the extension of the epidemic.*

# ABSTRACT OF THE REPORT

## ON THE

# QUARANTINE MEASURES

## APPLICABLE TO ARRIVALS WITH CHOLERA

THE Committee was composed of His Excellency Salih Effendi (President), M. Stenersen (Vice President), M. M. Le Comte de Noidans, de Soveral, Drs. Bartolètti, (Reporter), Dickson, Baron Hübsch (Secretary), Maccas, Pelikan, Salvatori and Sawas.

The Report was dated 15th September 1866.

This Report treats of the subject of the second section of preventive measures to be adopted against the introduction of Cholera into Europe. The Committee states that it has been guided by the conclusion of the General Report, which had already been accepted by the Conference, and, while adopting the questions of the scheme which was approved at the thirteenth meeting, had, where it appeared to be necessary, made some additions to them, but, as it believes, in conformity with the views of the Conference. The Committee divides its work into five parts or chapters, in which it treats successively of the questions of restrictive measures in general; of sanitary *cordons* and isolation; of quarantine establishments and lazarets; of the regulations applicable to arrivals with Cholera, and of disinfection; and lastly, of the bill of health and the verbal declaration.

The Conference adopted this Report of the Committee, and the conclusions are, therefore, to be considered those of the Conference.

## CHAPTER I.

## GENERAL CONSIDERATIONS ON RESTRICTIVE MEASURES.

*I.—What does experience teach regarding the systems of quarantine hitherto in force? Can more success be expected from quarantine established on other bases? What are the fundamental principles resulting from experience which should be our guide in this question?*

It is not long since opinions were divided regarding the transmission of Cholera. The most general opinion was that Cholera was communicated by the air to great distances. On the other hand a large section of scientific men held the opposite, that it was communicated by man, but sought in vain to gain for it the ascendancy, because imbued, for the most part, with the doctrine of absolute contagion, they endeavoured to revive the obsolete measures that were formerly used against the plague. Both parties were evidently in fault, but experience was still insufficient, and they made mutual concessions, which resulted in the International Sanitary Convention of 1852, under which, in reality, neither a very exact quarantine was enforced, nor was a pure and simple free intercourse allowed. No light could be thrown by the working of such a system on a question so obscure and so difficult to solve. For what could be expected from a quarantine of three to five days, including most commonly the voyage, and not taking into account either the duration of the incubation, or the premonitory Diarrhœa, or infected goods, or linen soiled by the dejections? Also as regards the lazarets, those establishments, situated on badly chosen ground, adjoining towns, built like barracks or prisons, often crowded and with confined and unwholesome air, were in general more fitted to communicate Cholera to the neighbouring populations than to preserve them from its attacks. As examples, the lazarets of Beyroot, the Dardanelles, Ancona, and many others, may be cited.

It is true that, since the first appearance of Cholera in 1830, strict quarantines have been established—organised sanitary cordons on a vast scale—in Russia, in Prussia, and elsewhere in Central Europe, to avert the epidemic, but those measures, being under-

taken in the midst of dense populations and with inexact information about the disease, ended only, from the miscalculations, in negative results. It is even probable that the cordons contributed to the dissemination of the evil against which they were employed. Sweden, in 1847 and 1850, made a more sustained attempt than the other States of the north of Europe to protect itself; but here also Cholera passed the barriers that had been raised at the price of great sacrifices. Often the separation and isolation were not recourse to until the disease had already been introduced into the country, or its precursors and the Diarrhœa had already appeared. May it not be added that the men forming the military guard outside the Dardanelles lazaret communicated Cholera to the town population?

The Committee concludes that—*examples taken from the experience of that first period of quarantines are not conclusive.*

Among the trials that were made there were some that were successful. Such was that at Mecklenburg in 1859. Greece, by a complete sequestration of all arrivals with Cholera on inhabited islands, escaped all the epidemics which have ravaged Europe, excepting in 1854, when the Piræus was occupied by foreign troops. In 1865 Cholera was twelve times imported in two months into the lazarets of Delos and Skiathos, and it was there extinguished. Candia had like success twice in one month, by a strict sequestration of the arrivals on two islets. Volo twice preserved itself by enforcing quarantine on a desert island. New York gives the striking proof of three importations rendered abortive by intelligent measures of sequestration. Examples might be multiplied, but they will be found in the historic sketch of the epidemic which was presented to the Conference by another of its Committees.

The Committee is of opinion that *it is incontestable that quarantine, established on rational bases and in conformity with the progress of science, may serve as an efficacious barrier against the invasion of Cholera.*

The bases on which to rest a new system of prevention should be sought in the experience derived from various epidemics, and more particularly that of 1865, and in the conclusions adopted by the Conference on the question of transmissibility. The Conference has said that Cholera is transmitted by the sick, by choleraic dejections, by contaminated goods, by soiled linen—its principal vehicle being the ambient air. The duration of incubation exceeds a few days, seven at most, and Choleraic Diarrhœa very short duration.

The Committee agrees that, if quarantine were to be instituted, the errors of the past, making permanent cordons and the customs of the middle age which systematically separated the East from the West, it would seriously affect the interests of the whole world. But what is proposed is based on facts determined by science, and excludes that blind routine now for ever condemned.

The measures to be adopted may be divided into two series—*First*, to find the means of preventing the importation of Cholera from the Indian side; to isolate it in the Hijaz, when it is developed there in consequence of the pilgrimages; to take special measures when it appears in Egypt; to interdict emigration from contaminated places; to break off communication between infected places and the surrounding country; in short, to apply the restrictive measures, as near as possible, to the primary and initiatory sources of the epidemic—*Secondly*, to establish entirely isolated lazarets; to fix the duration of the quarantine in accordance with that of the incubation of the disease, and without losing sight of the premonitory Diarrhœa; to subject the ships, the clothing and linen, to disinfection by washing, airing, and the reputedly most efficacious chemical processes; excepting in exceptional cases to allow merchandise to pass without purification; in ships in which there is carried out a series of measures applicable to the time of their departure and during the voyage, to allow the time occupied in the voyage to count towards shortening the quarantine after arrival, so far as may be compatible with the public safety. In other terms the bases of the new system of prevention, in the

opinion of the Committee, should consist of, *first, combating the germs of the disease in its primary sources before they disseminate and propagate themselves beyond; second, establishing quarantine in accordance with the principles now admitted regarding the transmissibility of Cholera and its mode of propagation.*

## CHAPTER II.

### SANITARY CORDONS, ISOLATION, INTERRUPTION AND RESUMPTION OF COMMUNICATION.

*I.—What is the amount of utility of sanitary cordons? In what circumstances are they applicable, and how are they to be applied?*

The cordon, formed of a line of troops, or of detachments posted at intervals, has for its object to isolate a country and to intercept its communications, in order to hinder an epidemic from being propagated. Experience has proved that the utility of cordons depends on their extent and the manner of placing them. The trial in 1831 failed because it was on a great scale in a populous country; and from its being too near the sources, for the soldiers to be free from exposure to the infection, they were attacked, and became the means of disseminating the disease. Under such circumstances the cordon would be more dangerous than useful.

It would be otherwise if the cordon were formed under the opposite conditions; if the country were thinly peopled; if the ground were favorable to its being easily watched; if the men forming the cordon, placed at a convenient distance from the source of the disease, were themselves sheltered from infection; if the sanitary authority were to attach to the premonitory Diarrhœa the importance due to it; in a word, if the rules as to isolation were so scrupulously observed as to maintain a vacant space round the choleraic centre.

The Committee cites instances of the efficacy of cordons from the records of the disease in Russia, Palestine, and Arabia. The Committee concludes that *sanitary cordons in the middle of* *thick and dense populations are of uncertain effect, and often* *are dangerous; on the contrary, in limited localities, or countries* *that are thinly peopled, as in some countries of Asia, cordons are* *fit to be very useful against the propagation of Cholera.*

III.—*What are the teachings of experience on the subject of the isolation of the sources or centres of Cholera?*

If the question of isolation is taken in its general aspect, it is intimately connected with that of cordons, because when cordons are useful, and it is possible to establish them, there is surety of profitably isolating a centre of Cholera. Isolation of a source or centre is practicable and useful in certain cases, difficult in others. In the East, where the villages are relatively far apart, where the intercourse between one town and another is not so frequent as it is in Central Europe, and where the people are of sedentary habits, isolation is more easily carried out than in countries where the rapidity and the multiplicity of the communications, the commercial activity and the interchange of interests, keep multitudes of people in constant movement. Infractions in this latter case would be inevitable, and the end would not be attained. Nevertheless, the Committee is of opinion that *isolation, wherever it can be employed in the first cases that mark the beginning of an epidemic, is a measure of prudence, which no country should neglect to take for its safety.*

The Committee concludes also that, *first, the isolation of a place attacked with Cholera is more practicable and useful in proportion as the population of the country is more thin and the sequestration takes place more near the beginning of an epidemic; second, the isolation of the initiatory sources is the chief measure of prevention against invasions of Cholera,*

*IV.—In what cases is the interruption of communications with infected places applicable?*

In carrying out this, the epidemic would exhaust itself or spot, without propagating itself beyond it, as in caravans in the desert. This heroic measure is not always applicable. It is but rarely that it can be employed, and the Committee does not think it possible to stifle Cholera in its source, unless it be in a circumscribed and primary source, such as a house, a public establishment, a village, or even a town or a canton. This measure would be applicable to a sea port with a restricted commerce, and only limited maritime intercourse with the surrounding

The conclusions are, that *interruption of intercourse is the best means of isolating the choleraic sources, and consequently there is reason to employ it always when circumstances favor its being rigorously carried out; but that measure, which is applicable only to circumscribed points, becomes impracticable and inefficacious when the epidemic has propagated itself to a great extent.*

There were two of the Committee who voted against this conclusion.

*V.—Is it not advantageous under all circumstances to restrain emigration from infected places? By what means can this be attained?*

Restriction of communication is often applicable, and more practicable than absolute interdiction. There is reason to restrain embarkation at the sea ports as much as possible, and to subject those that are to go on board to a series of preliminary precautions. But the restriction on embarkation should have principal reference to emigration. Emigration from a centre of the disease to a great number of other places has spread the germs of Cholera over all the European continent. Thirty-five thousand persons left Alexandria; forty thousand, out of a population of a hundred and seven thousand, emigrated from Valentia; Palma had its population reduced from fifty thousand to ten thousand; out of thirty-seven



thousand, fifteen thousand emigrated from Carthagená; Barcelona, counting a hundred and ninety thousand inhabitants, was reduced to half that number by emigration.

The Committee proposes, *first, to restrain emigration within the boundaries of the infected town; second, to fix by regulation the number of persons which each ship may take on board in proportion to its capacity; third, to subject individuals and their personal effects to every necessary precaution, such as medical visitation, purification of clothes and goods, &c.*

The Committee thinks this measure is a very important guarantee, not only as regards the ports of debarkation, but also as respects the passengers, whose life would perhaps be more endangered on board crowded vessels leaving a centre of Cholera than in the infected town they are leaving.

### CHAPTER III.

#### LAZARETS.

*VI.—What are the conditions that experience has shown to be necessary to make these establishments in all respects answer their object—as to position at a distance from inhabited places, facility of access and of victualling, salubrity of site, kind of building, interior arrangement, classification of the parties in quarantine, &c.?—as to lazarets of observation, temporary lazarets, floating lazarets, international lazarets?*

During last epidemic the greater part of the lazarets failed in their end in allowing Cholera to reach the towns in their proximity. Their defects are numerous; there are faults of position, construction, arrangement, interior economy, and many others, which it is necessary to take into account in the quarantine system to be adopted for Cholera.

On the other hand, lazarets improvised under tents and in barracks, but with complete isolation, have shown the best results.

The contrast is striking between the lazarets of Greece, Candia, Volo, on islands, and the lazarets of Odessa, Ancona, the Dardanelles, &c., near towns.

It is necessary to give preference to desert islands, and secondly to places far removed from centres of population, and situated so as to ensure absolute isolation.

There are many other conditions to fulfil in choosing a site for a lazaret—

1st.—As to the nature of the soil. The best is that which is granitic; while a porous and alluvial soil, by its porosity, is susceptible of becoming, according to the theory now generally admitted, a receptacle of morbid germs.

2nd.—It is advisable to avoid marshy soils, sources of intermittent fever, and apt, under certain circumstances, to give activity to the Choleraic principle.

3rd.—The site should be provided with a sufficiency of good water.

4th.—One of the conditions of the highest importance is that there be a good anchorage, sufficiently large to shelter in safety a great number of ships. The facility of access at all times would be the more necessary were the establishment on an island, because the revictualling should be regular, and undertaken in such a way that those in quarantine would want for nothing.

## *VII. The plan and arrangement of lazarets.*

The present lazarets are usually a square court, a kind of cloister, surrounded with buildings communicating more or less with one another, and containing the dwellings and the warehouses for the deposit of merchandise and for its disinfection; an infirmary (but this is not always found), a parlour, and some apartments pertaining to the administration.

The capacity of these establishments is generally insufficient in times of epidemic Cholera. All these buildings should be abandoned.

In 1865 quarantine was performed in the lazarets under tents and in huts. The huts have given good results, and would be preferable to masonry buildings were it not that they want solidity and durability. The Committee proposes that, with some exceptions, masonry should be adopted for the buildings.

A large place being given, if possible on an island, or, in default of this, in the country and several miles from any habitation. There should be built apartments for those in quarantine, an hospital for the sufferers under Cholera, wash-houses, stables and enclosure for animals, a hotel, apartments for the administration, and other accessory buildings. There should be besides places for landing and storing merchandise and provisions.

1st.—The habitations of those in quarantine should consist of many ranges of small ground floor houses, divided internally into four apartments, with windows on the four faces, and capable of lodging twenty persons, perhaps five in an apartment. Every cottage should be separated from the rest by a distance of (20 *metres*) about sixty-five feet, and every range, consisting of ten cottages, by an interval of (100 *metres*) three hundred and twenty-eight feet. This system is in use in Greece, and was in operation during the last epidemic.

2nd.—The hospital should be of several separate small houses, constructed on the same plan as the dwelling apartments. It should be partitioned into two apartments, of which the one in front would serve for Cholera sufferers, the other for those affected with simple Diarrhœa. Each house, well exposed and well aired, should contain five to ten beds. A dispensary for necessary medicines should be attached to the hospital; also a kitchen for the convalescents. There should also be a dwelling reserved for the physician and the attendants on the sick.

3rd.—There should be two wash-houses in every lazaret—one for the hospital, the other for the inmates of the other dwellings. They ought to be distant from one another and from other buildings. Particular care should be taken to prevent their waste waters infiltrating the ground.

4th.—A store of bedding and furniture should be at the disposal of the Establishment, and the Administration should watch over the cleanness of the articles, lest they should become a means of transmitting the disease.

5th.—The Committee advises that there should be three classes of apartments—the first for persons in easy circumstances, the second for the middle class, the third for those less accustomed to conveniences. The prices of these lodgings should differ accordingly, and should be fixed by regulation.

6th.—The hotel of the lazaret should be isolated and with necessary provisions, the prices of which should be determined and be fixed by competent authority. Those conducting the hotel should in no case be in communication with those performing quarantine.

7th.—The warehouses for merchandise not subject to purification should be outside the lazaret enclosure, and near the landing place, in order to facilitate the unloading and loading of the ships. They should also be of an extent proportioned to probable requirements. The warehouses for merchandise subject to purification, should also be proportioned to probable requirements, but relatively less extensive than the former, because the articles liable to disinfection are comparatively few. The situation of these latter warehouses should be different from that of the former, but always outside the lazaret enclosure, and at a convenient distance from the shipping, to facilitate operations.

8th.—A lazaret having of necessity to be watched by an armed force of greater or less strength, in order to maintain order and security, especially if on an island, or in a distant solitary place, it is necessary to provide accommodation for the troops. There should, therefore, be a guard placed at a distance of at least (200 metres) about two hundred and twenty yards from the quarantine establishment, because it is of importance to remove the troops, as much as possible, from risk of attacks of the disease.

9th.—There should be two landing places for every lazaret, one for the merchandise and persons in sequestration, the other for that are allowed free commerce. There must be an Office of Health, where those having the *direction* of all the establishment reside. Its situation should be near the port.

10th.—The question as to continuing the custom of having parlours attached to lazarets and allowing visits to those in quarantine was discussed by the Committee. The majority is of opinion that it is prudent to suppress the parlours and forbid visits. The prohibition was not to extend, however, to those who, for reasons, might wish to enter the lazaret and remain with the quarantine of those with whom they have thus come into communication should last, and submit to all the consequences of the position in which they would thus place themselves.

11th.—The Committee is of opinion that there is reason for subjecting living animals to purification, and therefore every lazaret should be provided with a special enclosure, with stables and sheds.

12th.—The question of latrines had much attention. It is the opinion of the Committee that drains and common latrines should be suppressed in all lazarets for Cholera, and that there should be used the most perfect pattern of moveable vessels, charged before hand with disinfectants. The excrementitious matters should be at once carried away, thrown into trenches dug in the earth, and covered with quick-lime and powder of vegetable charcoal. Two members of the Committee would have wished that every individual should have a separate vessel so placed that the medical man at his daily visit might inspect the alvine dejections to detect the beginning of Diarrhoea. But this, although practicable in an hospital, appeared to the majority to be too complicated for a lazaret containing hundreds of persons.

13th.—The arrangement at intervals of the blocks of apartments allows of the easy isolation of a group among which Cholera may appear; it allows also of the complete separation in classes, according to the degree of suspicion and the date of arrival. This classification is of the highest importance, and, unless it were strictly

observed, a healthy individual would be liable to contract the disease up to the last moment before his liberation. The separation in classes is necessary both for the security of those performing quarantine and to hinder Cholera passing the boundary of the lazaret, and it should be maintained with the greatest strictness. The distances between the different buildings in the lazaret will depend on the extent of ground at disposal, but it should be possible that the hospital be at least (200 *metres*) about two hundred and twenty yards, or a furlong distant from the dwelling apartments; that the houses of the establishment be yet farther from the hospital and the dwellings of those performing quarantine; that the hotel, the warehouses for merchandise, and the stables for animals, be outside the lazaret enclosure, at even greater distances from each other. It is of importance to keep in view that isolation would not be complete unless there were an interval of from a furlong to a furlong and a half round the different houses occupied by those suffering from Cholera, by those ill with simple Diarrhoea, by those under quarantine who are in good health, and by the persons having the administration of the establishment.

14<sup>th</sup>.—The question as to the persons composing the establishment for the service of a lazaret is of the greatest importance. The Committee does not enter into the details of the subject. It recommends that the direction of quarantine establishments should be committed to instructed physicians, understanding the value of the measures applicable to Cholera. It proposes besides that there should be at least three physicians in every lazaret, of whom one should be attached to the hospital, another should have the care of all others in quarantine, each attached to his special department, and neither having any communication with those beyond it. The third should, under the orders of the Medical Director, be charged with the duties of the port, and with the admission and discharge of those subject to quarantine.

### VIII.—*The number of Lazarets.*

(1<sup>st</sup>). *Lazarets of observation.*—The number of lazarets should be as small as possible, but should always have reference

to the extent of the sea coast of the State. The experience of Russia, Turkey and Greece, shows that it is of incontestable utility to have three classes of quarantine establishments—a limited number for strict quarantine, a greater number for quarantine of observation, and numerous posts for the mere control of arrivals and for inspecting bills of health.

The lazarets of observation should be specially devoted to the lodging of those arrivals with clean bills which the sanitary authorities have reason to suspect, whether it be because the place from which the ship has come does not afford all the guarantees of security that are desirable, or that there are particular circumstances connected with the ship, or because there has been communication with intermediate suspected places. There may be lazarets of this kind, without inconvenience, in all much frequented ports, provided that the quarantine of observation does not involve, unless in exceptional cases, the debarkation of the voyagers or merchandise.

(2nd). *Temporary Lazarets*.—They are for arrivals by sea or by land, and are for the preservation from Cholera of a locality which has not a permanent lazaret, and the trial of them which has been made in the East, during the last epidemic, gives evident proof of their efficacy. It is the system of encampments that is alluded to, a system which is fitted to be of great use, as it is perhaps the only one that is admissible in certain countries of Asia, on account of the climate and the mode of life among the people. The Committee believes it, above all, applicable to great masses of persons performing quarantine, and to pilgrimages.

(3rd). *Floating Lazarets*.—These might be made use of in cases of urgency. It was by this means that at New York the passengers from ships that had Cholera on board were, in the first instance, sequestered. The Commission cannot recommend the employment of floating lazarets, excepting in very exceptional and urgent circumstances.

*IX.—The question of international lazarets.*

An international lazaret, in the widest acceptation, would be a mixed institution as regards the administrative establishment and the expenses, which would be borne conjointly by the Governments taking part in it. All the advantages of such an institution, however real they may be, are counterbalanced by many inconveniences.

(1st).—There would be as many different appreciations of cases that might arise, as there were representatives of the Governments interested in them, and hence misunderstandings and conflicts of opinion and authority.

(2nd).—There would be great injury to commerce and navigation in forcing vessels to take a path the opposite often to that of their destination, to go to perform quarantine at a place more or less distant. For sailing ships, especially, such a deviation of path might have disastrous consequences.

(3rd).—There would be a large accumulation of ships and persons, which might produce great centres of infection.

(4th).—There would be infraction of the sovereign rights in the territory where such a mixed establishment was placed, which, it is presumed, no Government would allow in its possessions. The Commission, after weighing the advantages and disadvantages, abandons the proposal.

If a more restricted sense be attached to the international lazaret, the subject presents a more practical aspect. Such would be an establishment situated in a position favorable to navigation, under the administration of the local Government, without any foreign interference, and in which the ships of two or more nations would be allowed to perform quarantine, in virtue of a special convention entered into by the Governments interested, the payment of fixed dues being made according to agreement between the contracting parties. This system is in force in the Baltic among the bordering States. Sweden has the establishment at Kanzas, an islet in the Categat; manages it, pays the expenses, and remu-



nerates itself by a due which it takes from the vessels, and which is agreed to among Sweden, Russia, Prussia, Mecklenburg and Denmark. The Committee thinks there is reason to recommend the adoption of this system to Governments that may judge it useful to adopt it. Drs. Maccas and Pelikan recorded their opinion that in certain cases the utility of international establishments, under the administration of the local authorities, but under the control of mixed councils, is incontestible.

## CHAPTER IV.

### RULES FOR QUARANTINE AND DISINFECTION.

As shown in Chapter II., experience is in favor of rigorously enforced restrictive measures against the importation of Asiatic Cholera. The Committee explains that it inverts the order in the scheme of the Conference, in order to simplify the study of the subjects. It divides them into two sections, the first of which treats of quarantine properly so called, of the difference between rigorous quarantine and the quarantine of observation, of the duration of quarantine under different circumstances, and its application to persons and to ships. In the second section it explains the system of disinfection applicable to ships, to articles supposed to be contaminated, to personal property, clothing, merchandise, living animals, &c.

*X.—Quarantine. Are there grounds to admit of two kinds of quarantine, under the names of quarantine of observation and rigorous quarantine? In what does the difference consist?*

The distinction was established by the old regulations, and it was maintained by the Sanitary Conference of Paris.

The *quarantine of observation* consists in keeping apart and under observation a ship, its crew and its passengers, for a period that does not usually exceed a few days, counted from the time when the guardians of health are put on board, but it may be prolonged by the sanitary authority. It does not entail the discharge of cargo, except there be in it decayed and corrupted substances.

It does not require disinfection, but only general hygienic measures. It is applicable to suspected ships, even if furnished with a clean bill of health; first, if there are doubts as to the health of the place of departure, in order to give time to clear up those doubts, or if there have been calls at intermediate ports, or doubtful communications at sea; secondly, on account of the particular circumstances of the ship, and of the health of the crew and passengers. The quarantine of observation may be performed in any port where there is a sanitary establishment. The passengers remain on board or land at the lazaret, according to the special circumstances of the case.

*Rigorous quarantine* is sequestration and isolation for a fixed time, both for ships and persons, with disinfection of all that is capable of harbouring morbid germs. It necessarily implies the discharge of cargo at the lazaret. It is applicable, first, to ships from an infected place, with a foul bill for Cholera, with the exceptions to be afterwards mentioned; second, to ships that have had cases of Cholera on board during the voyage, although they have a clean bill. The quarantine begins for ships in ballast from the time the guardians of health go on board; for laden ships after the discharge of cargo; for persons from their entering the lazaret.

According to the Committee, *the difference consists in the quarantine of observation being a time of probation, of simple watching, while rigorous quarantine consists in the debarkation at the lazaret with disinfection, and comprises all the measures applicable to an arrival with Cholera.*

*XI.—What ought to be the duration of the quarantine of persons coming from an infected place? From what time ought the quarantine to count?*

It is the rigorous quarantine that is here under consideration. This question is essentially connected with that of the duration of incubation, regarding which there is far from being the agreement that is desirable. Another question connected with this one is that of the capability of the premonitory Diarrhoea to transmit the disease.

The Conference has pronounced its conclusion on those points, and the Committee, basing its reasonings on that conclusion, proposes —

*1. That rigorous quarantine, applicable to persons coming from a contaminated place, be fixed, as a general rule, at ten complete days, and that this quarantine begin for persons from the time they enter the lazaret. That if during the quarantine, cases of Cholera or Choleraic Diarrhœa occur among them, the healthy persons, after separation from the sick, should begin again the quarantine of ten whole days.*

This is agreed to by all, except Dr. Pelikan, who proposes days of quarantine.

The Committee is of opinion that there is ground for suspecting persons affected with Diarrhœa, and for isolating them from those who are well, just as is done with the sufferers under Cholera, and for not allowing to them free intercourse at the end of the regulated quarantine until after medical observation has proved the non-choleraic nature of the Diarrhœa.

Drs. Pelikan and Sawas thought that arrivals from an infected place suffering from Diarrhœa should be detained until completely cured, unless in chronic cases, declared to be such by medical certificate from the place of departure.

*XII.—In quarantine applicable to ships supposed to be contaminated is there not ground to make a distinction between those in which Cholera has manifested itself and those where the disease has not appeared? What measures would be applicable in the one and in the other case? Should disinfection always be imperative? In the instance where a crowded ship had a severe epidemic of Cholera on board, would there be ground for subjecting it to unusual precautions? What should those precautions be?*

The principle is, that every ship arriving from a place infected with Cholera is subjected to rigorous quarantine. In this case after the examination on arrival the ship is sequestered, the passengers are landed at the lazaret, as also the goods liable to purification, and the disinfection is immediately proceeded with.

Here is seen the difference that should be made between a ship arriving from an infected place and which during the voyage has had cases of Cholera on board, or cases of Choleric Diarrhæa, and another ship the crew of which and the passengers have been in a satisfactory state of health, without having had any casualty giving room to suspicion of Cholera. The Committee thinks that in the second case the procedure should be much less severe than in the first, because there is less to fear. The sequestration and the duration of the quarantine, fixed at ten days, ought to be the same in both cases; it will besides be necessary in the second one to use simple purification by airing, washing, &c.

In merchant ships with small crews and few or no passengers, and making long voyages that exceed fifteen or twenty days, the long voyage is a guarantee that should be taken into account towards lessening the duration of the quarantine.

The Committee proposes—

*First, to apply to ships supposed to be contaminated the rigorous quarantine, fixed at ten whole days duration, dating from arrival. Second, to allow a difference between ships on board of which Cholera, or Choleric Diarrhæa, has appeared, and ships which have had no signs of Cholera during the voyage. In the first instance all measures of rigor, isolation and disinfection, should be considered applicable; in the second the ships should be exempted from discharging cargo not liable to purification, and should be subjected only to general hygienic measures without disinfection properly so called. Third, to subject to exceptional precautions crowded ships, and those on board of which a severe epidemic of Cholera has appeared, precautions which should consist of a more complete isolation, disinfection by the most active agents, and even the prolongation and the doubling, according to the case, of the duration of the quarantine. Fourth, to reduce to five days the quarantine of ships that have had a voyage of fifteen or more days without any occurrence of Cholera on the voyage.*

*XIII.—Is there not ground, in certain specified circumstances, for including the duration of the voyage of ships arriving, in the time fixed for the quarantine? If it is so, state the circumstances.*

The Committee does not hesitate to recognize the right that ships in which no choleraic sickness has appeared, have to be treated differently from those in the opposite condition, and thinks it can admit the principle that, under certain conditions, the duration of quarantine might count from the day of departure. The conditions should comprise, first, the presence on board of a medical man devoted to the charge. Second, the use of a series of fitting measures at the place of departure, during the voyage and at the place of arrival, those measures being that the crew and passengers about to embark be visited officially by a medical man, who should ascertain their state of health, and exclude those showing the least indication of a choleraic kind. (Chronic sufferers having a special medical certificate might embark.) That the persons embarked should have only such baggage as is strictly necessary, and their linen should be washed before embarkation. On the voyage there should be continued the measures of disinfection, airing and washing the ship, articles in use, and, above all, soiled linen. The medical man on board should watch all those operations, should ascertain the state of health of those embarked, and note the cases of sickness that come under his observation in a register, which he should render on arrival to the sanitary authority. The Committee thinks account should be taken, under such circumstances, of the length of the voyage in fixing the duration of the quarantine, but it is divided in opinion as to the time for which it should count. Dr. Dickson maintains, in accordance with the admitted time of incubation, that after a voyage of ten days free intercourse might be allowed without danger to the health of the public. Drs. Maccas and Pelikan propose to reduce to seven days the quarantine of ships that arrive in a healthy condition after a passage of a week, and to five days that of those whose voyage has exceeded two weeks, but this quarantine should always be rigorous and its duration be counted by complete days. Some members of Committee think that, under the circumstances specified, and when there has

been no indication of Cholera during a voyage of nine days, free commerce should be allowed after twenty-four hours quarantine of observation. There was a long discussion, but unanimity could not be arrived at.

The opinion of the majority is *that ships with a foul bill with Cholera which shall have fulfilled the conditions specified in this article shall be able to reckon the days of the voyage as days of quarantine until they reach nine days. They shall perform at port of arrival a quarantine of observation, calculated so as to complete the regulated ten full days.*

The Committee proposes the following scale :

*After 24 hours voyage 9 days quarantine of observation.*

..	2 days	..	8	..	..
..	3	..	7	..	..
..	4	..	6	..	..
..	5	..	5	..	..
..	6	..	4	..	..
..	7	..	3	..	..
..	8	..	2	..	..
..	9	..	24 hours.		

*For ships that have had a voyage exceeding nine days the quarantine of observation should always be at least twenty-four hours.*

*XIV.—From the time of the arrival of a ship can the quarantine be performed on board? In what cases, within what limits, and how?*

As regards the quarantine of observation, this has already been answered. But there are exceptional cases in which even rigorous quarantine is performed on board. This would be the case in ports where there is no lazaret, or where ships are detained by stress, as when damage does not allow of their reaching the lazaret port. Quarantine might be performed also in ships with foul bills, but in a satisfactory condition as to health, and with a very limited number of passengers. The Committee is of opinion

*that the seclusion may be carried out in ships in the case of quarantine of observation, and sometimes in rigorous quarantine, through force of circumstances; but in all cases the sanitary authority will take care to avoid crowding, and will keep an attentive watch over the health of those in quarantine.*

#### *XV.—Land Quarantine.—What ought its duration to be?*

Arrivals by land are less likely to transport the germs of disease than those by sea, on account of the airing and isolation of the travellers, a circumstance which lessens the chances of the spread of the disease. The Committee believes that this difference between arrivals by sea and those by land authorizes a diminution of the quarantine in favor of the latter, unless when the epidemic is raging in the neighbourhood; and it proposes in consequence a quarantine of eight entire days for all arrivals by land, excepting in pilgrimages and movements of troops, for which the rule should be more severe. Nevertheless, it is understood that, if the arrivals by land have left a centre of the disease within a march of from one to three days, the quarantine should be for ten full days.

#### *XVI.—Disinfection.*

It is applicable to contaminated ships, to clothing and articles in personal use, to certain specified goods, and to living animals.

##### *1st.—The disinfection of ships.*

The disinfection should begin by unlading, performed as much as possible by the ship's crew, unless the sanitary authority arranges otherwise in certain very serious cases, such, for example, as a violent epidemic on board, which would necessitate the landing of all the crew at the lazaret. The ship being anchored in an isolated position, the well is emptied, and the disinfection of the hold by fumigations of chlorine are proceeded with. The hatches are opened, and windsails and ventilators are placed to air the interior of the ship. Copious washing is performed, and oil paint-

ing, which completes the disinfection. In the case of a severe epidemic on board, all the measures for disinfection will be employed oftener, and with more perseverance than in less grave cases.

*2nd.—The disinfection of linen, clothing and personal property.*

Those things will be landed at the lazaret with the persons to whom they belong. Before sending them to the wash-house, they will be immersed in water charged with chloride of lime, and will be left in it for some time. They will then be exposed in the open air during all the remainder of the quarantine. The linen and clothing of sufferers from Cholera will be treated with all the strictness, and will even be destroyed by fire, when it is judged and the sanitary authority judges it to be necessary.

*3rd.—The disinfection of susceptible goods.*

The aptitude of goods to transmit Cholera is not yet demonstrated. That the transmission may be possible, especially through certain articles, such as rags and skins eminently apt to be impregnated with morbid germs, is less doubtful, but it appears certain that goods imported from India, whether by Suez or directly into Europe, have never transmitted Cholera.

Besides, the contamination of goods cannot take place but through their being soiled by the dejections of the sick. But it cannot be admitted that goods coming from manufactories can be soiled as linen and clothing which are used by the sick may be. In consequence the Committee make two great divisions: one to comprise goods issued from factories and well packed in bales; the other to include rags and skins, leather and other animal substances, also goods not packed in bales, such as raw wool, and similar substances, which, coming from contaminated places, would be more or less exposed to contact with the passengers. Goods of the first class, which may be called not susceptible, will be landed at the lazaret, placed in a warehouse, and exposed to the air during the quarantine; they will then be delivered without being disinfected. Those of the second class, among which it is judged necessary to include made clothes, because they are handled by workmen who might infect them, will be subjected to disinfection by



airing, immersion in water, washing, and chemical means, such as the chlorides of lime and soda, &c., according to the nature of the goods. Letters and despatches, which are exposed to contamination by the touch of persons with Diarrhœa, are in the list of articles to be disinfected.

#### *4th.—Living Animals.*

The Committee considers there are grounds for subjecting them to restrictive measures and disinfection in circumstances to be decided by the sanitary authorities.

*Definitions.*—*Disinfection consists of the employment of different means fitted to purify places and articles contaminated by the choleraic germ. The means are the air, water, fire in certain cases, also chemical substances recommended by science and noted in the Report on Hygienic measures. Disinfection is applicable to ships arriving from infected places, and on board of which there have been either a severe epidemic or isolated cases of Cholera, or only cases of Choleraic Diarrhœa.*

2. *It is applicable to clothing and articles in use, as well as to persons undergoing rigorous quarantine, whether in the lazaret or on board ship,*

3. *It is applicable besides to goods supposed to be contaminated, such as rags and skins, hides, feathers, and other animal substances, as well as wool and other articles not in bales coming from an infected place, or from a ship that is subject itself to disinfection. Letters and despatches will be enclosed in a box, and disinfected with chlorine without other process. Goods in general coming from manufactories and well packed in bales are not reputed to be contaminated, and consequently are not liable to disinfection.*

4. *Lastly, disinfection is applied to living animals by airing or immersion in water, when the sanitary authority judges it to be fitting.*

## CHAPTER V.

## THE BILL OF HEALTH AND THE DECLARATION.

The presenting the Bill of Health, together with the verbal declaration (*arraisonnement*), makes up what in sanitary administration is required in the (*reconnaissance*) examination of an arrival from sea. The Bill of Health is to a ship what a passport is to a traveller. It certifies the state of health of the place of departure and of the places touched at, and the sanitary authorities enter in it, when they happen, the cases of diseases to quarantine that have occurred on board.

*XVII.—Ought there to be three kinds of Bills of Health,—the foul, the suspicious, the clean.*

The *foul bill* is that which is given at a port where Cholera prevails: the *clean bill* is given when there is no Cholera. It is the same with regard to other transmissible and contagious diseases. The *suspicious bill* does not say whether Cholera exists or not, but leaves the state of health of the port of departure doubtful, because, although the place itself is healthy, it is in communication with an infected locality, or because there have been cases of illness of a doubtful character. The Committee, after having discussed the question, proposes to discontinue the doubtful Bill of Health, and to continue the clean bill and the foul bill, the one testifying to the absence of Cholera, the other attesting its presence, and also its amount.

*XVIII.—When ought Asiatic Cholera to be mentioned in the Bill of Health, and when should the mention of it cease?*

Even a single case of Cholera, the first that may have shown itself, ought to be noted in the Bill of Health, because the first case, when an epidemic breaks out, is quickly followed by others, and it is very important that precaution should be taken against importation at the beginning of an epidemic. If one or many ships are allowed to leave with a clean bill after one or two cases, there is no assurance that the succeeding cases may not manifest them-

selves on board those ships, as they before departure were exposed to the same chances of contagion as the inhabitants of the place they have quitted.

It is necessary, however, to determine what should be understood by the first cases that mark the beginning of an epidemic. It is necessary to distinguish between Asiatic and common Cholera. As it is a fact, the Committee says, that Asiatic Cholera is an imported disease in Europe, if, in the absence of an epidemic, all at once appear one or many cases of Cholera that cannot be connected with a centre of Asiatic Cholera, it is evident that the disease is very different from that which it is important to mention in the Bill of Health. But, on the contrary, if the first cases that show themselves in a place may be connected with an epidemic prevailing in the neighbourhood, or farther off—if, in short, there is fear or threat of an invasion of Asiatic Cholera, the first cases should be noted in the Bill of Health. Error is apt to be caused by confounding the terms—cases of *Sporadic Cholera* and *Sporadic cases of Cholera*—they are very different. The first expression means isolated cases of common Cholera, *Cholera nostras*; the second means isolated cases of Asiatic Cholera. It is the latter that it is important to mention in the Bill of Health.

The Bill of Health should continue to give the number of cases until the epidemic ceases, and, from the day on which the last case was observed, it should be noted that since such a date no new case has occurred. This note will guide the sanitary authorities at the place of arrival with regard to free commerce.

It would be imprudent to allow free intercourse on the simple announcement in a Bill of Health that Cholera had ceased. This cannot readily be ascertained in a large town, and there may be fresh outbreaks after short intermissions. The Committee believes it to be a necessary precaution that there should be a period of fifteen days between the cessation of the epidemic and the granting a clean bill. In conclusion, the Committee is of opinion that the *Bill of Health ought to mention Asiatic Cholera from the appearance of the first case until the last that marks the close of the*

*epidemic. That the sanitary authorities ought not to allow free commerce to arrivals from a place where an epidemic has prevailed until fifteen days after the date of its complete disappearance.*

*XIX.—Is it not absolutely necessary, as a guarantee for the health of the public, that a ship should have but one Bill of Health granted by the sanitary authority at the port of departure? And is it not equally necessary that the bill be not changed until the arrival of the vessel at its final destination?*

The bill gives assurance of the health of the places left and touched at. It specifies the number of persons on board, the kind of cargo, and whether the ship was in quarantine or had free intercourse at the time of departure. It is, therefore, necessary that there should be but one bill, and that it should be granted by the sanitary authority, who alone knows all the circumstances, and is responsible for entering them in the document. It is often the case that the master of a vessel has three bills—one from the sanitary authority, the second from the Consul of his country, and the third from the Consul of the country to which he is proceeding. This practice is attended with danger, not only because these documents sometimes do not agree, but because the masters of vessels, to escape restrictive measures, can elude the vigilance of the authorities, by presenting in an infected port one of the bills which has been given them with an entry of Cholera, then subsequently in another and healthy port the clean bill of the original place of departure.

There is another custom that is hurtful. The sanitary authorities of some countries exchange the original Bills of Health of the place of departure for new bills, which they grant to ships touching before they have reached their final destination. They thus deprive the authorities at the places subsequently visited of the only document which should inform them of the preceding circumstances of the voyage, and of the health of the original port of departure.

The Committee recommends that the form of Bill of Health of the International Sanitary Conference at Paris should be adopted, and that it should be printed in two languages, that of the country and of French, as is the practice in Turkey and the Russian ports of the Black Sea. In conclusion, the Committee uses the very words of the question at the head of this section in answering it in the affirmative, and adds that *the sanitary authorities ought to confine themselves to make entries on the original Bill of Health without replacing it with a new bill until the return voyage.*

The Committee also proposes that Governments that attach great importance to the continuance of Consular Bills of Health should consent, for the sake of the public health, to substitute for them an entry on the bill granted by the sanitary authority.

#### XX.—*The Examination and Declaration in times of Cholera.*

The declaration (*arraisonnement*) is the verbal declaration of the master of the vessel as to all the incidents of the voyage that are connected with the public health. If the master makes a declaration contrary to the truth he gets free entry, and the way is opened for Cholera. This took place in 1865 at Suez and at Constantinople. If he reports cases of Cholera on the voyage, then, even although he has a clean bill, the ship is subjected to rigorous quarantine. If the declaration is unsatisfactory, the arrival is held to be suspicious, and is placed under restriction.

In time of Cholera, ships with foul bills, and those which have had cases of Cholera on the voyage, ought to go to an appointed port to undergo rigorous quarantine. On entering they will carry the yellow quarantine flag. Ships with a clean bill, or liable only to quarantine of observation, can enter all ports. The flag which distinguishes them before free intercourse is granted is the yellow one.

Conclusion. *The verbal declaration is of the highest importance in time of Cholera. Concealment and false declarations*

*render the best arranged restrictive system illusory, and compromise the health of the public. They ought to be severely punished by the laws of every country.*

The Committee expresses the desire that to supply an existing want the Ottoman Government would, with the shortest delay, publish penal laws against infractions of the sanitary regulations.

ABSTRACT OF THE REPORT  
ON THE  
MEASURES TO TAKE IN THE EAST  
TO PREVENT NEW INVASIONS OF  
CHOLERA INTO EUROPE.

THE Committee was composed of Count de Lallemand (President), M. Kalergi (Secretary), M. de Krause, M. Vernoni, Drs. Bosi, Bykow, Fauvel (Reporter), Polak, Salem, Sotto and Van-Geuns.

The Report was dated the 20th August 1866, and was signed by eight; the three others, M. de Krause and Van-Geuns and Dr. Polak, left before the work of the Committee was finished.

The Committee divides its work into two principal parts, one treating of the measures to take in India, the other those to take in the countries between India and Europe. It then arranges methodically, in those two divisions, all the questions that appear connected with the problem under consideration. The Committee deems it useful to seek the solution of the two preliminary questions which are comprised in the first chapter of its Report.

## CHAPTER I.

## PRELIMINARY QUESTIONS.

QUESTION 1st.—*If the inconvenience accruing to commerce and to international relations from restrictive measures were weighed against the disturbance to industry and commercial transactions attending an invasion of Cholera, which would preponderate?*

This question presupposes that quarantine is efficacious against the importation of Cholera. The inconveniences caused by quarantine are in proportion to the extension of the disease, and the activity and importance of the relations that the countries subjected to restriction have with other lands.

A country in quarantine sees its relations disturbed, its export trade hindered by the obstacles it meets in the places where restrictive measures are in force. The more severe those measures and the less foreseen, the injury is the greater. To the detriment caused by the loss of time there have to be added the expenses connected with quarantine, which raise the price of goods.

But epidemics of Cholera at any given place are not usually long, consequently the restrictions they bring are transitory. Eminent merchants, it is said, remarked to the Committee that when quarantine was once removed, commerce would immediately resume an activity that would compensate for the loss sustained. The inconveniences of restrictive measures are chiefly felt in the country that imposes them.

In a country that is the prey of epidemic Cholera, trade and industry are immediately suspended; the mass of the public thinks only of escaping death; transactions are confined to things absolutely necessary; there often is famine, always rapidly increasing misery for the people; and ruin would soon have to be feared in a commercial or manufacturing city, if this state of things were prolonged, or often repeated.



According to the testimony of merchants whom the Committee consulted, the loss occasioned by restrictive measures is as nothing in comparison with the incalculable evils caused by the troubles in epidemic such as that which prevailed at Constantinople in 1855, and of which the disastrous effects were still far from being repaired. A country stricken with Cholera suffers doubly, whether quarantine measures are taken against it or not. It suffers from the disease, and also in its commercial interests. It has to be marked that it is not the merchants who complain most of restrictive measures; it is the idle, the tourists whose pilgrimages are hindered.

It is in the interest of all to take suitable measures to arrest the invading progress of Cholera, since these will not aggravate the confusion in transactions with infected countries, and because through them the injury caused by the ravages of the disease will be avoided. And as the countries which are most exposed to Cholera, and which believe that their supreme interest is to guard themselves from it, will never abstain from such measures, it follows that it is for the common interest that an international understanding on this subject be established.

*Conclusion—Restrictive measures, known before hand and suitably applied, are much less prejudicial to commerce and international relations than the disturbance which affects industry and commercial transactions in consequence of an invasion of Cholera.*

This is adopted by all the members of the Committee, except M. Van-Geuns.

*QUESTION 2nd.—Ought we not to start from the fundamental principle, that the nearer that quarantine measures and preventive means are applied to the primary source, the more we may reckon on their efficacy?*

The inconveniences of quarantine measures increase with the diffusion of Cholera, in civilized countries, at the same time that

their efficacy diminishes, and it follows naturally that the nearer to the original source that measures can be applied and in lands less peopled than Europe, where the relations are less active, where natural obstacles to the march of the scourge exist, more the chance of arresting it will increase, and the less onerous will the restrictive measures be, even if they are very severe.

It is well to inquire up to what point in the countries between India and Europe those measures can be applied with hope of success. A look at the track hitherto followed by Cholera entering Europe, will throw light on this subject.

*By land* Cholera leaves India by the North-West Provinces, thence it invades Afghanistan, then Persia by Herat and Meshid. From Meshid it was propagated in Bokhara, and then, crossing the steppes of Tartary on the east of the Caspian Sea and lake Aral, it reached Orenburg in 1829. The principal radiation from Meshid is westward by Asterabad and the shore of the Caspian to Tehran. From this capital it advances in many directions; southward to Ispahan; southwestward, by Hamadan and Kermanshah, it reaches Mesopotamia; northward by the shore of the Caspian, by Recht, Lenkoran and Bakoo; and from those ports it has reached Astrakan by sea in the three epidemics. It was by Astrakan that in 1830 and 1847 Cholera entered Europe. Persia is separated from Beloochistan by vast deserts, and has never been invaded by Cholera through that country.

*By sea* Cholera is exported from India westward and north-westward, from the Malabar Coast, and chiefly from Bombay, where it is endemic. In consequence of this proximity and their numerous maritime relations, the east coast of the Arabian peninsula and the coast of all the Persian Gulf are the shores most exposed to its importation, and those where, after India, it prevails with greatest frequency, so much so that we might ask if the disease is not endemic on all the coast. From the Persian Gulf the disease has reached Busora and Bagdad. Muscat is subject to Cholera, and all the coast of the Hadramaut, to the entrance of the Red Sea, is rather often visited by it; but Mokulla ought to be

particularly mentioned. Ships coming from India frequently revictual there before entering the Red Sea, and it is thus exposed to attacks of Cholera, and may become a centre of propagation.

Other Indian ports, besides those of the Malabar Coast, contribute to the exportation of Cholera, but it is chiefly south-eastward, to Malacca and the Dutch islands, that it is carried from Bengal. Singapore merits special attention, as it is not only a great mart for commerce, but, from its constant intercourse with the Indian peninsula, it appears to be also a mart for Cholera; besides, the gathering place of a considerable number of pilgrims, who might to ten thousand yearly embark there for Mecca.

Last year, 1865, it was ships (under the Ottoman flag) from that place that suffered most during the voyage; and if it is added that the embarkation of pilgrims takes place there in circumstances that could not be more painful, it will be comprehended that for the Hijaz, arrivals from Singapore ought to be reckoned the most dangerous.

Cholera is imported on the shores of the Red Sea either directly by ships from India, or indirectly from the secondary centres on the Arabian coast; and when, along with the pilgrims, it enters the Hijaz, and, being unarrested in its course, it invades Egypt, there is danger to the ports of Europe, and its importation into them is infallible, if it be not opposed by severe measures.

In considering the probabilities of being able to arrest Cholera issuing from India, it is seen that its track by land is from the Punjab. Although the roads leading thence are not very easy, and are very well adapted for restrictive precautions, there is no hope for the institution, in the barbarous countries through which they lead, of measures fitted to aid the natural obstacles to the extension of Cholera. The Committee believes that much more is to be expected from a system of precautions organised in the Punjab itself by the care of the English Government.

Persia, the principal victim of the emissions of Cholera from India, both by land and by sea, becomes a secondary centre from which the disease radiates far. Although Herat, placed in a

defile among high mountains and the desert, is, as regards Cholera, a strategic point, and the principal, perhaps the only passage for the disease, it is doubtful if the Persian Government has in its hands the means of putting in force suitable measures for barring the passage. There would be less difficulty to encounter in opposing the disease on the maritime frontier in the Gulf, but that would require the co-operation of the Imam of Muscat, who holds Bundur Abas, and nearly all the navigation of its waters.

When Persia is invaded by the disease the difficulties increase. It would be difficult to organise an efficacious barrier from the Caspian to Bayazid, but to the Russian Government the difficulty would not be insuperable. It has only to render perfect a system that has long been organized. The passage across the Caspian from Asterabad to Astrakan should be watched.

The line to be defended between Persia and Turkey extends from the junction of the Russian, Persian and Turkish territories at Bayazid on the north to the head of the Persian Gulf, but if the Trans-Caucasian provinces are invaded the line would begin at Batoon on the Black Sea. This line is guarded by sanitary posts at its principal entrances, but, unless better managed than hitherto, the barrier in some parts will be illusory.

As regards the probability of arresting Cholera in its advance *by sea*, the Strait of Babel-Mandeb presents a natural barrier which it would be possible to oppose to the introduction of the disease into the Red Sea. It is, therefore, necessary to place the first obstacle there. If the Red Sea is invaded, then Egypt must be defended by the most severe measures. If Egypt is invaded, there will be little danger of extension from it by land; it is by way of the sea that danger is to be feared, and it would be best that Egypt should resign itself to the severest measures during the short continuance of an epidemic, to ensure effectual protection to the interests of Europe.

*Conclusion.—The nearer to the original source that quarantine and other preventive measures against Cholera are applied, the less onerous and the more efficacious are they likely to be as regards the preservation of Europe.*

## CHAPTER II.

## MEASURES TO TAKE IN INDIA.

QUESTION 3rd—*Is there reason to hope that Cholera can be extinguished in India, or at least that its epidemic development can be restrained? With this view, will it not be proper, while carrying on the hygienic improvements already undertaken, to institute fresh investigations on the endemicity of the disease, investigations on the spot which will require much time, and which the English Government alone is in a position to undertake, to indicate the particular points on which the investigations should bear?*

The essential cause of the endemicity of Cholera is not known. It is not even exactly known what are the places in which it really exists in the endemic form; nor what connection there is between its endemicity and its epidemic development.

The Committee certainly does not pretend to dictate to the distinguished medical men who are already occupied with these questions as to the best way to follow in such an undertaking; but it cannot but give an opinion as to the particular points that appear worthy of attention.

It is known that Cholera is endemic at Calcutta, Cawnpoor, Allahabad, Madras and Bombay, but there is no certainty that it is not endemic in other places. There is, therefore, room for more precision as to the places in India where endemic Cholera exists. This is a statistical question.

To solve the problem of the cause of the endemicity, the Committee thinks that the peculiarities of the soil where the endemic is very manifest is, perhaps, the most important of the points to be investigated. Are the conditions which Pettenkofer regards as indispensable to the development of Cholera *always* found?

Are the localities where the endemic reigns distinguished by any *exclusive* peculiarities, whether in the position, the habitations, or as regards habits newly contracted, as in the burning of corpses in food, or in the state of misery?

All the investigations should aim at ascertaining if Cholera generates spontaneously, exteriorly to man. If, for example, being the product of a peculiar organic decomposition, it has its birth in, and is disengaged with more or less activity from the soil, like a palustral miasm—or if, as is more probable, the morbid principle, once produced, is generated only in man; the ground and air is on its surface being only receptacles more or less favorable in which the germ coming from the sufferer from Cholera may be preserved, and from which it disengages itself with an activity varying with circumstances.

Is there not reason to believe that instead of Cholera being annually imported by the pilgrims from endemic sources, it rather exists permanently in the places of pilgrimage, and breaks out every year under the favoring circumstances produced by the concourse?

Lastly, since 1817, has Cholera at any time been seen in India to break out spontaneously in a locality until then exempt from the endemic? And, if so, has such a manifestation been the beginning of a spreading epidemic?

Independently of those investigations, the hygienic improvements already begun should be followed with the greatest energy. And the Committee inquires whether it would not be admissible to adopt some precautions to restrain the exportation of the disease from its endemic centres.

The Committee is convinced that, in order to restrain the ravages of Cholera in India, hygienic measures ought to have in view all classes of the population; otherwise all the solicitude and all the admirable precautions with which the English troops are surrounded will not hinder Cholera from occasioning considerable losses among them, such as statistical returns now show, and as are likely to recur so long as the source of the evil among the

Natives is not restrained. To judge from the immense sanitary works begun at the principal towns of India, and the duties committed to the three permanent Sanitary Commissions, the English Government appears to have perfectly understood this.

*Conclusion.—The Committee does not think it impossible to succeed in extinguishing invading Cholera in India, and it believes that in every case its epidemic development could be restrained. To attain this double end it admits the necessity of continued investigations, having for their object to ascertain the special conditions to produce and maintain endemic Cholera, as well as the connections which exist between this endemic and its epidemic outbreaks, at the same time pursuing the hygienic improvements already begun. As regards the particular points on which the investigations should bear, the Committee refers to what precedes.*

*QUESTION 4th.—From what we know of the principal part that pilgrimages bear in the development of Cholera in India, is it not desirable that heed be given to restrain, as much as possible, the influence of this cause, and to continue on a greater scale the use of the means already, during two years, employed with some success? To point out the measures?*

The Committee states its opinion that Hindoo pilgrimages are of all the causes of epidemics in India incomparably the most powerful. It thinks that a person must be convinced that what has been enunciated in the General Report of the Conference as to the importance of those pilgrimages or fairs, far from being exaggerated, is, on the contrary, under the reality.

Mention is made of the measures taken at Conjeveram in 1864 by the advice of the Madras Sanitary Commission, and of the measures recommended for pilgrim camps by the President of the Sanitary Commission for Bombay, and the rules that were by him suggested to prevent the returning pilgrims from carrying Cholera into the towns and military cantonments.

The Committee asks if there is not a possibility of adding certain precautions to the measures already taken, and, with a view to lessen the concourse at the sacred places, if it would not be possible to require that every pilgrim before his departure be furnished with special permission from the authority under whom he is, and which should not be granted except on proof that he has the means of supplying his wants during his journey. Such a condition would have the effect of keeping away from the pilgrimages the mass of beggars that flocks to them, and that is the chief aliment of epidemic Cholera.

The Committee can only propose this important measure without solving it, because it is to be feared that the measure that it has in view may be such as would raise a dangerous opposition among the Natives. Of such a case the English Government is the only good judge.

The Committee praises the arrangements for the sanitary police of the places of pilgrimage, comprising the hygienic measures that have been mentioned, and expresses its desire that these may be made more general and complete, as experience may indicate.

It is on the return of the pilgrims, when Cholera has broken out, that the great danger begins. Against this danger the Government of Bombay has already, as has been shown, adopted certain measures, of which the principal, the Committee thinks, is to interdict the pilgrims that have Cholera among them from entering towns. But, the Committee asks, is the forty-eight hours quarantine of observation a real guarantee? \* It thinks not.

\* The adviser of the Government in this matter did not think this was all that was to be desired, but only that, if strictly enforced, it would be beneficial, as affording the two days that is so common a time, during an epidemic in India, between exposure to infection and the manifestation of illness. The proposing a longer detention, to include possibly more tardy development, would have had the appearance of giving greater security, but it was thought it would in reality frustrate the object from its being impracticable, as there was no law to enforce it, and armed force could not be contemplated. Even the two days detention was subsequently ruled to be legally impracticable. The people of Poona, however, have had the good sense to submit to the detention of their sick, returning pilgrims.

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The Committee states its belief that the true means of hindering the diffusion of the disease would be not to allow the departure of the contaminated masses until after the complete cessation of the epidemic among them, and after a general disinfection; but at the same time it acknowledges that this would be altogether impracticable with the immense assemblages at Indian pilgrimages. Such measures would presuppose a suitable place where the mass might be scattered and guarded, where neither shelter nor food, nor drinking water, nor means of disinfection, nor succour to the sick, would be wanting. Nevertheless, the principle of hindering the dissemination of Cholera, the Committee says, is good and should be acted on when there is the opportunity.

*In recapitulation, it is important—*

*(1st.)—To endeavour to restrict the number of pilgrims, by obliging them, if it be possible, to provide themselves before departure with a pass, which should be granted to those only who are proved to have the means of supplying their wants during the journey.*

*(2nd.)—To establish in all places of pilgrimage a sanitary police, comprising the hygienic measures already in practice, and to be completed in accordance with the teachings of experience.*

*(3rd.)—In case of Cholera among the pilgrims not to allow the return of the contaminated mass (when such a measure is practicable), excepting after the complete cessation of the epidemic in the mass, and a general disinfection.*

**QUESTION 5th.**—*Is there not need to use means to prevent the exportation of Cholera from India? Among those means is there not reason to particularize the institution of a sanitary police at the place of departure specially applicable to pilgrims, and in time of an epidemic that of a Bill of Health, &c.?*

The means of preventing, or at least of lessening, the exportation of Cholera from India by sea are solely dependent on the

English authorities, and the employment of them is not likely to raise all the practical difficulties which might be opposed to measures taken to extinguish Cholera.

Act XXI. of 1858, for the regulation of Native passenger ships, is the first step of importance in this matter, and even now it might be considered the bases of all the measures to be taken against the exportation of Cholera. It has some imperfections and omissions. Thus there is the mistake that it is applicable only to ships carrying the English flag, and consequently it is excluded by speculators who undertake to carry Moosulman passengers in foreign vessels, and particularly under the Ottoman flag.

Could not the Act be applied without distinction to all the English ports in India? Even more, in the ports of all the powers who have Indian possessions, and to all ships of the class in question, whatever may be their flag? This should be viewed as an essential condition to be fulfilled.

Another circumstance to be noted is that masters of vessels under the English flag find the means of freeing themselves from obedience to the Act when they come to Judda. As an instance of this it is cited that in 1865 the ships *North-Wind* and *Persia* left Singapoore, which is subject to the Act, and touched at Mokulla, in preference to Aden, and, there being no English authority there, they escaped control, and finally reached Judda. At Judda could the contravention of the Act be dealt with? That there was contravention of it as regarded the number of passengers was very evident.

Another omission in the Act is, that English ships leaving a foreign port are not subject to it. The *Sidney*, that perhaps had no right to carry more than 500 or 600 passengers, took with impunity as many as 2000 on the voyage from Judda to Suez. It is desirable that the Act should be in force in all places.

In the details of the Act there is nothing said regarding the state of health of the persons embarked, and consequently nothing to hinder the embarkation of those having the premonitory signs of Cholera. There is no mention of measures that would neces-

sitate a good sanitary condition of the ship on its arrival. The Act, however, with certain extensions and additions, would answer end as regards the embarkation of the pilgrims.

This Act is only applicable to the hygienic conditions of the ship and its fitness for sea, but no ship leaving India should be exempted from being furnished with a Bill of Health, certifying to the health of the place of departure and the number of persons embarked, and the Bill of Health should be examined at the intermediate ports touched at, in conformity with the rules adopted in

The Bill of Health, to be of value, should be granted by sanitary authority at the place of departure, and consequently there should be a Medical Establishment organized for this, especially in ports named for the embarkation of pilgrims. Among such ports Singapoore deserves particular attention.

The Committee asks, if in case of an epidemic of Cholera at the place of departure it would not be possible to prevent the embarkation of pilgrims at the place, or to delay it until the end of the epidemic, or to render the conditions of embarkation more severe than usual? But these are delicate questions, and it is necessary to leave the solution of them to the competent authorities. Another question of the same order is, if it would not be possible to exact from every Moosulman pilgrim from India before departure the proof that he has the means of meeting the expenses of his journey?

The Committee mentions that the Dutch Government in its Indian possessions, wishing to reduce the increasing number of pilgrims to Mecca, made it obligatory for every pilgrim to have a passport which cost 110 florins. The High Court of Justice, having found this to be illegal, suppressed the passport in 1852. The number of pilgrims, however, increased greatly, and the Government judged it necessary again to require a passport, which was granted on certain conditions, of which the chief one is that the applicant has proved that he has the necessary means for his journey going and returning, and that he has made suitable arrange-

ments for the maintenance of his family in his absence. Perhaps, it would not be impossible to extend this to the English possessions in India.

Recapitulation.—*It is of the highest importance to prevent the exportation of Cholera from India by sea.*

For this end the Act of 1858, entitled the Native Passenger Act, would be the principal means, if it were made applicable to all flags without distinction, and if it were complete with regard to sanitary precautions.

Besides, it is of importance that every vessel leaving an Indian port should be furnished with a Bill of Health, granted by a sanitary authority appointed for the purpose, who would at the same time have to watch the fulfilment of the rules relative to the embarkation of pilgrims.

And the Committee believes there is reason to consider the questions, whether in case of an epidemic at a place in India it would not be possible to prohibit, or to defer, or to restrict, the embarkation of pilgrims at that place; and lastly, if, after the example of the Dutch Government in its Indian possessions, it would not be possible for the English authorities of India to require of every Moosulman pilgrim proof that he has the means of meeting the expenses of his voyage and of the maintenance of his family during his absence.

## CHAPTER III.

ASURES TO TAKE IN THE COUNTRIES BETWEEN INDIA AND EUROPE.

*A.—Against the importation by sea.*

QUESTION 6th.—*Would it not be suitable to institute at the entrance of the Red Sea, on an island if possible, a sanitary establishment, where all ships entering that sea would be submitted to examination, and would, if there was need, be subjected to quarantine measures? If so, what ought to be the character of the establishment, by whom, and how should the measures be enforced?*

The utility of such an establishment has been theoretically established by what precedes. The present question is its practicability. Whether at the entrance of the Red Sea there are the conditions indispensable to its working, namely, a suitable position, security, salubrity, safe anchorage, sufficiency of drinking water, facilities for supplies. It is clear that if such conditions are not met in a reasonable degree in any part of its waters, the establishment cannot be instituted. If all the requisite conditions were found combined, it is not impossible that considerations of another nature might form an obstacle to an establishment of this nature.

A great quarantine establishment at the entrance of the Red Sea ought to be at the same time both a lazaret and a post of observation, and consequently should be situated so as to be able to watch effectually all ships entering, and, besides, should have the means of subjecting contaminated vessels properly to the prescribed measures. Those conditions imply the greatest possible proximity to the Strait of Bab-el-Mandeb.

The island of Perim is in that situation dividing the narrowest part of the Strait into two unequal passages. The greater passage, between the island and the African Coast, is fourteen miles wide; the smaller, between Perim and Cape Bab-el-Mandeb, or rather

between Perim and Pilot Island that is separated from the Cape by a narrow channel, is four and a half miles wide. Ships can pass on either side of Perim. The island of Perim is four and a half miles long and two broad, and it rises 230 feet above the sea level. It is a rock entirely bare, and without fresh water. On its south-west side there is a good port, but it is small. This last inconvenience is compensated by good anchorage at a little distance, near Cape Bab-el-Mandeb. The English Garrison receives all its supplies, including water, from without.

The position leaves nothing to desire, but the Committee do not think it suitable for a lazaret, where a large number of men have to be sheltered and fed. However, Perim is the best place for the location of the maritime force required for the examination of ships and for watching the Strait.

A place for a quarantine establishment presents itself at a little distance outside the Strait and on the south-east of Cape Bab-el-Mandeb. It is a flat shore of easy access, where there are palm trees, and where good water is reported to be found. There is good anchorage under shelter of the Cape and the islands.

There thus appears to be the possibility of establishing at the entrance of the sea a post of observation, which would be chiefly on Perim, and a lazaret, to which infected arrivals might be sent after examination. The Committee adds that this is but a suggestion, and that a full investigation on the spot would be indispensable. Besides the places named, there is none known that is suitable outside the Strait. There is no information regarding Obokh, the French possession on the African Coast. The large island Harnish has no resources; Jubulzoogur, although having a little water, some vegetation, and some good anchoring ground, does not possess other requisite conditions. The island of Kamaran near the Arabian Coast, between Hodeida and Loheia, has water, supplies, and safe anchorage, and it is near Yemen, which ensures facility in victualling. But it would be difficult to avoid dangerous communication with this the most populous and the least civilized part of Arabia. It would, besides, be very difficult to hinder contraventions at Kamaran, or to oblige suspicious vessels to go there.

The sanitary establishment would be attended with great expense; it would require a large number of persons, and a considerable Military and Naval Force, to carry out the prescribed measures. Neither Turkey nor Egypt could take the management; England would be capable of doing so, but would it consent? And then would there not be great objection to entrusting the key of the Red Sea to one Power?

After discussion, the Committee concludes that the projected union should be international, that it should be established and maintained at the expense of the Powers interested, and placed under the superintendence of a mixed Council, with a delegate from each nation. The Committee repeats that *the international character of the Council is a condition 'sine qua non' of the sanitary establishment.*

Every ship entering the Red Sea ought to be subjected to examination, to ascertain its state of health, or at least (for that is always possible) the sanitary condition of the ship. According to the result of the examination, the ship would be authorized, by an entry or countersignature in the Bill of Health, to continue its voyage, or would be detained in quarantine, if, from the nature of casualties, overcrowding, the place of destination, or any other circumstance, the free entry of the ship into the Red Sea be judged to be dangerous. Regular packet-boats, and, in general, ships offering certain specified guarantees, while being under obligation to submit to examination, might be allowed to continue their voyage, even in case of choleraic casualties, on condition of performing quarantine at the place that would be assigned for them. But that such measures may be carried out with the impartiality, intelligence and firmness, that are desirable, their execution should not be entrusted to any one Power.

*The Committee concludes that the measures be applied in virtue of international regulations, which should particularize the cases, and by an authority subject to the control of the Governments interested.*

QUESTION 7th.—*The pilgrimage to Mecca.*

*The organization of a Sanitary Service on the Coast of the Red*

This organization would comprise posts for medical men, whose duty it would be to give correct reports of the health of the country; to grant and to examine Bills of Health; to watch the execution of hygienic or other prescribed measures; and also certain lazaret posts particularly appropriated to the carrying out of quarantine measures.

The posts of the first kind should occupy the principal trading ports on both shores. On the African side it is indispensable that Koseir, Sooakin and Musowa, be watched. They are all under the Egyptian Government, and at the two first, there is already a sanitary service. On the Arabian shore there would be difficulties in organizing a sanitary service, owing to the number of places to watch, and the ferocity and the fanaticism of the people, who are not under the Ottoman dominion, and are hostile to any European interference. There is not, however, absolute impossibility of effecting it. The seat of the office having the direction of all the others in the Hijaz should be at Judda. Yambo is another important place. There should be a third post south of Judda, either at Leeth or at Gonfonda, if it could be placed there with safety.

As regards the lazarets, the Committee makes distinction between the place where pilgrims affected with Cholera would perform quarantine, and where ordinary arrivals would be subjected to preventive measures. The danger is not the same, and the means of isolation that suffice for a small number of travellers are not applicable to a multitude, such as that of a pilgrimage. It was thought that there should be reserved for pilgrims returning by sea three places, where in case of Cholera among them they would be admitted to perform quarantine. They were in order from south to north on the Arabian Coast, El-Wesh, Moilah and Tor. The Egyptian Government, however, is opposed to Moilah, from apprehension of clandestine communication with the



Egyptian shore, and it is, therefore, omitted. Tor would be reserved for ordinary arrivals with Cholera. El-Wesh would be appropriated for the quarantine of pilgrims. It is five days' march north of Yambo, and is under the Egyptian Government, which keeps a garrison in a fort at some distance from the sea. The port is large and safe, and is accessible for large vessels; there is abundance of excellent water, both on the shore and in the neighbouring valleys; fresh food is easily procurable on the spot, without reckoning on revictualling by sea. Tor is a little town at the foot of Mount Sinai, with good anchorage and abundance of fresh water. It can easily be victualled from Suez.

The Committee is of opinion that quarantine should not in any case be performed in the neighbourhood of Suez, as, for instance, at the Wells of Moses. At Suez there should be a post of observation, and it should be the seat of the direction of the whole sanitary service of the Red Sea, which should be assisted by the proposed International Commission.

*Conditions of departure, and precautions relative to the embarkation of pilgrims.*—The Moosulman law requires that whoever undertakes the pilgrimage should have means sufficient for the voyage, and for the subsistence of his family in his absence. This is acted on by the Dutch Government in its Indian possessions, and also, it is said, in Morocco, Tunis, and doubtless in Algeria. Its adoption is recommended to the British Government, and also to the Turkish and Egyptian Governments.

The carrying of pilgrims by sea is at present left in the Turkish and Egyptian ports to the greediest speculation. It is urgently required that suitable arrangements should be made, and the Indian Native Passengers' Act, with the modifications that have been specified, should be applied.

*Hygienic measures to put in practice in the places to which pilgrimage is made.*—The Commission that was sent in 1865 by the Ottoman Government into the Hijaz took precautions at the sacred places, which consisted principally of removing the filth that encumbered the town of Mecca and other places; establishing

slaughter-yards out of the town; removing to a distance the pits for the maceration of skins; the establishing of an hospital of sixty beds; assigning asylums to the beggars who crowded the great Musjid and the streets; clearing out the filth from the reservoirs of Arafat; cleaning the conduits that bring drinking water to Mecca; digging five hundred latrines at different places of the valley of Mina, and large trenches to receive the blood of the animals slaughtered; and preparing, at a considerable distance, other trenches in which to bury the offal. All those measures were accomplished, not only without resistance, but even with the concurrence of the authorities of Mecca. It is of importance that those measures be perfected and regularly carried out by the sanitary police. In addition, the pilgrims should be provided with abundance of drinking water. The temporary latrines should be filled up daily, and disinfected with quick-lime if possible. Encampments out of the town should be arranged so as to avoid crowding and its consequences. Succour should be given to the sick, and Cholera should be treated separately.

*Is there any measure to take in the Hijaz against the importation of Cholera by sea or by land?*—Mecca being the place of concentration, if the port of Judda were closed the infected pilgrims would, nevertheless, reach Mecca by other ports. It would, therefore, be necessary to be able to stop the passage by land, but that does not appear to be practicable. The only thing that seems practicable is, if the Hijaz were free from disease, to subject to quarantine (without expecting great benefit) every contaminated ship arriving at Judda. The Committee places no reliance on any quarantine measures that could be taken in the Hijaz against the importation of Cholera.

*Measures to take with arrivals from the Hijaz if Cholera manifest itself there during the pilgrimage.*—Pilgrims wishing to return to Egypt by sea should be taken to El-Wesh, there to perform a quarantine of ten days, and the ship that afterwards takes them thence to Suez with a clean Bill of Health, would have to call at Tor, and remain under observation twenty-four hours. The caravan for Egypt would, according to usage, halt at the station near

El-Wesh; it would there be inspected, and would not be allowed to proceed until after having been ten days exempt from Cholera. Pilgrims from India and other countries beyond the Red Sea would be allowed to embark on their return home, but would have to submit to the rules laid down by the sanitary authority of the port of embarkation.

The communications between the Hijaz and Egypt should not be re-established in less than ten days after the cessation of any sign of Cholera.

QUESTION 8th.—*Measures to take in case of an outbreak of Cholera in Egypt.*

Egypt, as regards Cholera coming from the Red Sea, is a defile through which it must almost of necessity pass to reach Europe; but it is a defile at the outlet of which the disease radiates widely, owing to the maritime relations of the country with all parts of the Mediterranean. As a gate to be passed, Egypt offers a natural obstacle, of which advantage may be taken by concentrating there the means of prevention; while if only the radiations of the disease were opposed here and there, and but one weak point were left in the defence against an enemy so subtle as Cholera, it would be enough to occasion the loss to all Europe of the benefits of the measures adopted generally. If on the Asiatic or European side of the Mediterranean one coast were badly watched, or one unfaithful or negligent agent permitted any compromise, the whole of the defensive system would be ruined. As it is easier to oppose an invading enemy by shutting a narrow gate through which he must pass than by leaving him an open field, it is clearly for the common interests that the door of Egypt be firmly closed.

If the European Governments decided on interrupting all intercourse with Egypt during the epidemic by a blockade, the consequences would be that the epidemic would there run its course, and have neither more nor fewer victims than if the door towards Europe were open to emigrants. The inhabitants could still resort to dispersion by making encampments in the desert places of the

country, and, in all probability, the epidemic would in two months have become extinct, because in warm countries its course is more rapid than in Europe. The interruption would not hinder urgent communications that, with necessary precautions, could be allowed without danger.

It will be said, would the immense interests of commerce, and the transit to India across Egypt, and the Suez canal—so many interests of the first order—agree to such an interruption and allow it to be enforced? The Committee admits without difficulty that those great interests would view the proposed measure in a very bad light, and does not in the least doubt that, if they were powerful enough, they would oppose it. But that is not a question for the Committee; it endeavours only to establish that the interests embraced in the whole commerce of Europe, even those of the relations with India, should not be opposed to the temporary interruption of the communication between Europe and Egypt, if that interruption would have the result of ensuring Europe against an invasion of Cholera.

If Cholera, notwithstanding all precautions, were to appear in Egypt, there could be only the choice of two evils—the loss confined to the temporary interruption of communication with Egypt, or the immense loss caused by an almost certain invasion of Cholera in Europe. But in putting aside, for the present, the question of humanity, if the commercial losses on one side and the other were calculated, those resulting from the importation of Cholera from Egypt would be greatly in excess. The Committee proposes for the solicitous attention of the Governments which its members represent, the question—*In the case of an epidemic of Cholera coming by the Red Sea and appearing in Egypt, while Europe and Turkey are free from it, would it not be proper to interrupt temporarily the maritime communication of Egypt with all the Mediterranean?*

This was agreed to by all, excepting Salem Bey.

*B.—Against the importation by land.*

In the first place, Persia is considered with reference to the means of guarding it from Cholera coming from India, and to

measures which might restrain the development of choleraic epidemics. Then are considered the precautions that Turkey and Russia would have to take against an invasion of Cholera when prevailing in Persia, or the neighbouring countries.

QUESTION 9th.—*Measures to take in Persia, organization of a sanitary system, precautions connected with pilgrimages, the transport of corpses, &c.*

It has been shown by what ways Cholera enters Persia, and Herat is, as it were, the gate by which it passes from Afghanistan. But Herat not being in its possession, Persia is unable to protect Meshid on that side. When Cholera has reached Meshid, the important pilgrimage to this town, as is the case in India, furnishes its chief aliment, and is the principal cause of the propagation of the disease. To this are to be added the numerous commercial relations that centre in that town. But the most important pilgrimage, as regards the present question, is the one to Kerbela, and other places near Bagdad that are particularly venerated by the Sheeahs. This pilgrimage is performed at all times of the year, but the great influx is during the month of the Mohurum, when about sixty thousand Persians come to the neighbourhood of Bagdad. The Persians have the custom of carrying with them the remains of their relatives and friends, to bury them near the tombs of the *Imam*. Those human remains, exhumed in different stages of decomposition, are wrapped in felt, put into sacks, into panniers, sometimes into boxes, and are carried on horses or camels. But the worst is that the corpses of those who die on the journey are added to the old remains, in such way that every caravan as it approaches its destination carries a greater and greater number of putrid corpses. These caravans resemble moving charnel-houses, that diffuse fetid exhalations far around them. The Committee thinks that in Persia, as well as India, the pilgrimages are a chief cause of the development and propagation of Cholera.

In the present state of things it is not in the power of the Persian Government to ensure itself against the importation of

Cholera from India, either by sea or by land; but at least it might make some efforts to lessen the spreading of the disease in its own territory.

For this end there should be instituted in Persia a sanitary system on the model of that in operation in the Ottoman empire, that is, composed of a central administration, aided by a Council or Board of Health, half European, and having under it sanitary establishments at important places of the country, such as Meshid, Kermanshah and Tauris.

The Committee is of opinion that Persia might safely maintain a sanitary physician at Herat as a point of observation, and recommends it to do so. (The good to result from such observation in this case is not stated by the Committee.)

The hygienic measures approved of for India are believed to be equally applicable to Persia. The suppression of all pilgrimages during Cholera would be easier than in India, where there would, perhaps, be insuperable obstacles to it. Twice already the King of Persia has forbidden, temporarily, the pilgrimages under those circumstances. The granting of passports only to those who have the means of performing the journey should be put in practice.

As regards the exhumation of corpses, it would be possible, the Committee thinks, to render the practice inoffensive by making obligatory certain simple precautions, such as (1) not allowing the exhumation and transport of corpses, excepting during the three winter months: a law to this purport is already in existence, but it is not now in operation—(2) Requiring that corpses, whether fresh or in a state of putrefaction, be embalmed with disinfecting substances, among which bitumen is noted—(3) Requiring that the bodies thus embalmed be enclosed hermetically in metallic cases, tin plate for example.

The Committee thinks that Persia is generally salubrious, excepting on the borders of the Gulf and the shores of the Caspian, and would not have any great sanitary works to undertake.

QUESTION 10th.—*Measures to take on the Turko-Persian Frontier.*

There is already a line of defence from Busora, and even from Fao, at the mouth of the Shat-el-Arab, to Bayazid on the north, a line which is prolonged, in following the Russian frontier, to Batoom on the Black Sea. Along this immense line there are the following sanitary posts—Batoom, Ardahan and Kars, which have each a Medical Officer of Health.

The great road from Tauris to Trebizond does not go through Bayazid, but crosses the frontier at Kizil-Diza, four hours' march distant. There are here a Medical Officer, and a lazaret, where Persian caravans can perform quarantine. Proceeding southward, there is a sanitary station at Kotur, where also there is a Medical Officer; and at Van, east of Kotur, there is a post of observation. All those posts report to a Central Office at Erzeroom. The first post on the south part of the line is near Revendootz, at the pass to Mosul. This defile has been badly guarded this year (1866), as Cholera has passed it. Then there are the most important posts of this frontier—Soolcimanich, Khangeen and Mendelee. The Medical Officers of Health in charge of these and the one at Busora report to a Central Office at Bagdad.

This service may have been able to give good information regarding epidemics, but it has hitherto been powerless to preserve the Turkish territory from Cholera. This inefficiency proceeds from many causes—the extreme difficulty of watching so extended a frontier, the insufficiency of the means employed to do this, the feeble support, and often the ill-will, of the Governors of the Province, all which circumstances have combined to render useless the zeal of the sanitary Officers. The Committee suggests the necessity of improving this sanitary service.

The defence against maritime arrivals in the Persian Gulf is still more insufficient. Taking into account the difficulties of all kinds that are in the way of a complete organization on this coast, it appears, perhaps, wiser to return to the old system that protected Bagdad on the south by sanitary posts on the barrier that rests on the Tigris and Euphrates before their junction at Korna.

On the receipt of intelligence of Cholera being in Persia, the Governor of the province of Bagdad should come to an understanding with the Persian authorities, either to suspend the pilgrimage or to allow of only small parties at a time coming to the frontier, where they would perform quarantine before visiting the sacred places. Corpses should not be admitted then, or at any time, on Turkish territory, unless embalmed as before specified.

Arrivals from the Persian Gulf should always be attentively watched at Fao and Busora, and suspicious arrivals should be subjected to suitable quarantine. It would be well that all ships sailing in those waters should have Bills of Health.

QUESTION 11th.—*Measures to take against importation by Bokhara and the steppes of Tartary?*

The Russian Government has posts at the several passages of the river Ser-Durea, which is the frontier. The Medical Officer who reside in the forts on the banks of the river have to inspect the condition of the hordes of Kirgheez, and of the caravans that cross it. With the measures already taken, and what doubtless the Russian Government will judge suitable to add, Europe, in the opinion of the Committee, has not henceforth to fear the importation of Cholera across the steppes of Tartary.

QUESTION 12th.—*Measures to take on the Russo-Persian Frontier.*

Past experience and good sense show that the delta of the Koor is the part that it is of most importance to defend against an invasion of Cholera. The Committee asks itself if the defence is practicable, if this gate of Cholera can be closed, towards the land at Astara on the frontier, or towards the sea at Lenkoran and at Salian, or rather the isles of Sarcee near it? it cannot say, but it is convinced the Russian Government, so much interested in the question, will neglect no necessary means to accomplish it. The system supposes an efficacious watching of the whole Russian



coast of the Caspian, and quarantine measures organised on new bases in the principal ports that have relations with Persia, and principally at Bakoo and at Astrakan, where already there are lazarets. The line of defence on the land now comprises a number of sanitary posts, of which the principal are at Astara, Belasoowar, Jebrail, Sharoorah, and at Joolfa, on the road which leads from Tauris to Nukkshivan, where there is a quarantine establishment.

END OF THE ABSTRACTS.

**SELECTIONS FROM THE RECORDS OF THE BOMBAY  
GOVERNMENT,**

No. CII.—NEW SERIES.

---

**P A P E R S**

**RELATING TO THE INTRODUCTION**

**OF THE**

**SURVEY RATES INTO THE SEHWAN TALOOKA**

**OF THE**

**KURRACHEE COLLECTORATE.**

**Bombay:**

**PRINTED FOR GOVERNMENT**

**AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.**

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**1867.**



No. 217 OF 1866.

REVENUE DEPARTMENT.

To His Excellency

The Honorable Sir H. B. E. FRERE, K.C.B. & G.C.S.I.,

Governor and President in Council,

BOMBAY

I HAVE the honour to forward copies of the correspondence noted in the margin, relative to the introduction of Survey rates into the Sehwan Talooka of the Kurrachee Collectorate, and to request the sanction of the Governor in Council, in accordance with Section XXV. of the Bombay Act I. of 1865, to the proposed settlement.

Major Francis' No. 18, dated  
12th January 1866.

Collector's No. 279, dated  
27th July 1866, with accom-  
paniments.

2. Proposals for the settlement of this district were first submitted by Captain Haig in November 1863, which were approved of by Mr. Mansfield, and their introduction for the Revenue year 1863-64 was sanctioned; but a petition having been submitted against the settlement by the Zemindars of the District in the following year, it was referred by him to Major Francis, the Survey Commissioner, who, after personally visiting the district and carefully examining the lands of several villages himself, was convinced of the defectiveness of the classification, and considered a revision of the rates necessary. Major Francis' letter No. 18, dated 12th January 1866, which forms No. I. of the annexed correspondence, fully explains the objections taken by the Zemindars to the original settlement, and his reasons for recommending its revision necessary. The reply of Mr. Mansfield, which sanctions the revision, it is unnecessary to quote.

3. The revised assessment which has now been submitted makes, as will be seen from paragraph 3 of Major Francis' report No. 502, dated 17th July last, very considerable reductions in the rates of the Sailab lands [*i. e.*, Sailab aided by Moke from Rupees

6-4-0 to 5-0-0, Sailab aided by wheel from Rupees 5-0-0 to 4-8-0; Sailab unaided by any irrigation from Rupees 3-12-0 to 3-6-0] in the assessment of which the principal faultiness of the first settlement consisted, and the result is a reduction of the total Jumma of Rupees 1,47,368, fixed by Captain Haig, to Rupees 1,08,509, or about 35 per cent., but leaving the total of the Jumma under the new rates 11 per cent. in excess of the average collections of the last past five years.

4. The revised settlement is undoubtedly extremely light, and it is to be regretted that the effect of the rates on the area under cultivation last year, as compared with the actual realizations, has not been compared, for I am inclined to consider that had this been done it would have been perceived how very low they really are. There is, however, a difficulty in correcting their lowness now, as Mr. Mansfield guaranteed the settlement originally proposed by Captain Haig for ten years, and I concur with the Collector (see paragraph 7 of Major Francis' No. 502, dated 17th July) in considering that we are precluded from levying any increase on the rates imposed in 1864, unless by a compromise wherever a reduction has in a cultivator's holding been made by the revised settlement.

5. As the revision only corrects errors made in the first guaranteed settlement, I would, notwithstanding the great reduction it causes in the realizable Jumma, recommend it for sanction, for, for the reason already stated, general increases cannot, I consider, be added at present where they might otherwise have been made. I would issue, however, no proclamation, but simply correct the account of each cultivator's holding according to the revised rates, wherever this

*Vide* paragraph 3 of Major Lambert's letter No. 279, dated 27th July last, and paragraphs 9 and 10 of Major Francis' report.

was practicable, in consequence of the total amount payable under these rates being less than the total amount assessed under the original assessment. This course should, I think, be followed whenever an application may be made to take up fresh land the rates on which have been reduced by the revision. This would give some trouble at first, but it is the only way in which the revision can be introduced without on the one hand breaking faith as to the guarantee given by the Commissioner, and on the other hand obtaining compensation

for the reductions by putting on the increases recommended in the revision. It is true that the guarantee ought not to have been given without the sanction of Government, but it would not be right to plead this now.

I have the honour to be, &c ,

A. D. ROBERTSON,

Acting Commissioner in Sind.

*Commissioner's Office, Karachi,  
12th November 1866.*

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No. 18 OF 1866.

To

S. MANSFIELD, Esq.,

Commissioner in Sind.

SIR,—I have the honour to submit the following report upon the petition of the Zemindars of Sehwan Talooka against the Survey Settlement of that district.

2. The first explicit objection to the settlement, which is given in

That no distinction is made between the Sailabee rates fixed on lands fitted to grow inferior description of crops (such as Ahur, Gram, Sursee, and Mutter), and those fitted for wheat.

the margin, relates to the rates of Sailabee cultivation, which are said to be fixed without regard to the productive qualities of the land, that is to say, that lands capable of growing only inferior crops, such as Sursoo and Mutter, have been assessed at the same rates as the regular wheat-producing lands.

3. Sailabee cultivation, as you are aware, is dependent on water obtained from natural flooding. The main consideration in assessing such lands is to graduate rates by reducing them proportionately with the deficient supply as the flood waters tail off. It is impossible in most cases to define precisely the line to which the floods extend. In fact, the land flooded will vary according to the height of the inundation, a larger area being, of course, watered in a high than in a low inundation season. But although the line is not

definable with minute accuracy, it may be ascertained sufficiently near for all practicable purposes by the general character of the cultivation.

4. The classification rules for this kind of cultivation were devised with a view of meeting the peculiar feature in the water supply explained above. For if you will

\* Page 33.

refer to the printed rules\* appended to my report you will perceive that this kind of irrigation has been classed under three heads, which are described as follows :—

Class.	Value. Annas.	Description.
1	6	When the overflow is regular and sufficient to permit of a good crop of wheat being grown every year without fail.
2	4	• When the overflow is not so regular as to ensure a crop of wheat being grown every year.
3	2	When the overflow water remains too short a time to saturate the land sufficiently, or too long a time to permit of its being ploughed for a wheat crop, and consequently only inferior crops, such as Jamba and Mutter, &c., can be grown.

5. It is true that this system of classification had not been introduced in the Survey Department at the time the Sehwan Talook was classified. But Captain Haig adopted a plan of operations based upon the same general principles. Owing, however, to his classers being young and inexperienced men, the work was not carried out in the manner devised. Captain Haig has also explained, with regard to their operations, that the inundation was unusually high in the season in which the district was classified, and consequently that a much larger area than usual was flooded that year, and, as a further consequence of this high flood, he explains that a not inconsiderable extent of land fitted only, in the average season, for the growth of inferior crops, was that year under wheat cultivation. Taking the crop as their guide, the classers valued the lands thus cultivated exceptionably as regular wheat-growing land. The result is that land,

which, from its position with reference to the floods, is fitted only for the growth of inferior crops, has been assessed, as petitioners state, at the same rate as the land under the full influence of the Sailab waters, and capable of growing wheat regularly.

6. I regret to state that a careful examination of the lands of several villages has convinced me that this defect in the classification of Sailab lands is not confined to a few isolated cases, but prevails

generally throughout the district. I have met with several instances of lands assessed at the full Sailab rates of Rupees 3-12-0

and Rupees 3-5-0 per acre, which are of uncertain cultivation, even for the inferior kinds of crops. The adjoining fields in some instances are charged only with the rate for Baranee cultivation, that

is to say, a rate of 8\* annas has been applied to fields adjoining those assessed at

Rupees 3-12-0 or Rupees 3-5-0. There has been a mistake on both sides in these cases, for the field charged with only the Baranee rate, being at the tail of the flood, comes under the influence of Sailab irrigation occasionally, and ought to have had some addition to its rate on that account, whilst the other should have been decreased to the standard for the worst description of Sailab cultivation.

7. There is also another peculiar feature in the Sailab lands of the Sehwan Talook flooded from the Muncher Lake, which has not been properly estimated in the classification. I allude to the tract of land adjoining the water's edge of the Lake, which, owing to the water not receding from it till late in the season, is not available for cultivation at the season when wheat is sown, being fitted only for Jamba, Mutter, and such like inferior crops. The classification rate of these lands was slightly reduced on this account by Captain Haig, but not sufficient to cover the difference in value between them and the good wheat lands. It will be necessary therefore, as will be shown in the sequel, to correct this defect in the classification.

8. In paragraph 2 of their petition the Zemindars object to the Churkhee rates, on the ground that no reduction has been made for inferior lands, and no allowance made for fallows. In the course of my inspection I saw no case where reduction had not been made in the rates of this cultivation, both for inferior soil as well as inferior



water supply. If there is any defect in the rating of these lands, it will be found, in my opinion, to be on the side of liberality, for the classification rules, which appear to have been fairly carried out as regards this cultivation, provide liberally for all circumstances affecting inferior Churkhee cultivation. They are also incorrect in stating that no allowance has been made for fallows, for it is a leading principle in the settlement to estimate Churkhee and Moke Jowarry lands to be culturable once in three years, and the rate is based on this estimate of their capabilities.

9. In paragraphs 4 and 5 the Zemindars state the several circumstances for which remissions should be allowed, explaining the manner in which, in their opinion, they should be estimated. It is to be regretted that a promise of remissions formed one of the conditions of the settlement lease. I have all along been opposed to remissions, and expressed a strong opinion against the insertion of a clause on the subject in the settlement lease when the proposal came before me in Captain Taverner's report on the Kundiara Talook.

10. It appears to me that our settlement in Sind will be no improvement on the existing revenue system if they include a regular plan of allowing remissions.

11. The Sehwan Talook supplies an instance this year of the impossibility of carrying out such a system. The claims for remissions amount in the aggregate to about  
 \* I have not the Return with me, but state this from recollection      Rupees 30,000,\* and according to the course prescribed in the clause alluded to, every individual claim should be inquired into. I need scarcely say that it would be impossible for the Collector's Department to manage a settled district if such a system is continued.

12. I admit that there are special cases in Sind for which it is necessary to allow remissions, even in settled districts. Such, for instance, as for damage done by locusts, and by disastrous floods. But the circumstance of a field being said to be imperfectly flooded, or too much flooded or of a slight blight to the crop, should not form subject of inquiry under a properly regulated settlement.

13. From what has been explained regarding the classification of the Sailabee lands of Schwan Talook, it will be obvious to you that the rates for this cultivation must be revised. In fact, with your approval, I have already instructed Captain Haig to re-examine all fields at the head and tail of the flood line and make a systematic reduction of rates according to the plan prescribed in the classification rules. I shall request him to report the result for after communication to you.

14. With regard to the rates for this cultivation, the Zemindars complain of their being high. They would not, perhaps, have been thought so had they been equitably apportioned. I think, however, that as it is proposed to do away with remissions in future, except in the special cases of calamity referred to in paragraph 12, that on this account, and for the further reason of covering defects in the classification valuation, it will be advisable to make some reduction in the rates independently of the reduction which will be effected by the rectification of the original classification.

15. I have, consequently, instructed Captain Haig to reduce his original rates in the following manner, viz.—

	Rs	as.	Rs.	as
Sailab aided by Moke irrigation, to be				
reduced from . . . . .	6	4	to 5	6
Ditto by wheel irrigation, from	5	0	to 4	8
Sailab unaided by any irrigation, from	3	12	to 3	6

These reductions are for the first group of villages. A corresponding reduction will be made in the rates of the other groups. There is not much complaint of the good wheat lands with certain Sailab being over-assessed. I am, therefore, of opinion that the small reduction of 6 annas per acre will be quite sufficient in their case.

16. With regard to the claims for remissions this year, I think it will be found that the proposed rectification of the classification will include almost all cases in which they are really required. All claims under the heads of fields imperfectly flooded or overflowed will certainly be covered by that measure. There will remain, perhaps, for special consideration the cases of destruction by locusts, and, perhaps,

here and there a case of a large extent of waste land for which resignation was not preferred at the proper seasons.

17. I propose to make some further inquiry before submitting my opinion on the question of the number and date of revenue instalments, which forms one of the subjects of complaint in the petition.

18. The maintenance and repair of boundary marks is a work which devolves upon the Zemindars, and  
Paragraphs 7 and 8 of petition. petition for relief from it cannot be entertained.

19. No other part of the petition seems to call for any remark from me.

I have the honour to be, &c.,

J. T. FRANCIS, Major,  
Survey and Settlement Commissioner.

*Camp Mehur,  
12th January 1866.*

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No. 279 OF 1866.

REVENUE DEPARTMENT.

To the ACTING COMMISSIONER in SIND,  
KURRACHEE.

SIR,—In forwarding the accompanying report from Major Francis, I have only to remark that the  
No. 502, dated 17th instant. assessment seems generally very fair. Gaher is the only village in which it appears to be reduced more than is necessary. It is considerably below the collections of the current year, though I gave large remissions. Still, however, I would not alter the settlement, which has been made with so much care, for this one case.

2. There appears to be a mistake in a few of the entries of present assessment, as may be seen from the following table:—

*Present Assessment.*

Deh.	As entered in our papers.			As in Major Francis' Statement.		
	Rs	a	p	Rs	a	p
Kabrote. . . .	3,353	12	0	2,651	0	0
Mahee Ota. .	4,960	8	0	3,736	0	0
Kureempoor.	9,095	10	0	8,185	0	0

3. I think that one of the two courses pointed out in Major Francis' paragraphs 9 and 10 should be adopted. It does not much matter which.

4. I have forwarded copies of Lieutenant Doig's paragraphs 12 to 15, to the Chief Engineer and the Engineer for Canals.

I have, &c.,

W. R. LAMBERT, Major,  
Collector of Kurrachee.

*Kurrachee,*  
*Collector's Office, 27th July 1866.*

No 502 of 1866.

To A. D. ROBERTSON, Esq.,

Acting Commissioner in Sind.

SIR,—Referring to the correspondence terminating with Mr. Mansfield's letter,\* I have the honour to submit for disposal the accompanying report† upon the revision of the assessment of Sehwan Talook, prepared by Lieutenant Doig, whilst in charge of the Settlement Office.

2. On examining the details of the revised assessment proposed by that Officer, it appeared to me, judging from my personal know-

ledge of the district, to be desirable to increase the "Jumma" in some and decrease it in other, villages. Instructions regarding the modifications deemed necessary were therefore sent to Captain Wallace, who had meanwhile assumed charge of the Settlement Department, and that Officer has submitted the information called for. From Lieutenant Doig's original and these subsequent returns I have prepared the accompanying amended Statement, which shows the Jumma of each village as now finally settled.

3. The revision operations comprise an entire reclassification of all the Sailab lands of the district, combined with a reduction in the maximum rates for that cultivation, as shown in the subjoined Statement:—

Number of Class.	Description of Cultivation.	Captain Haig's Maximum.		Revised Maximum.		
		Rs.	a. p.	Rs.	a. p.	
I.	.....	6	4 0	5	8 0	Aided by Moke irrigation.
II.	Sailab .....	5	0 0	4	8 0	Ditto by Wheel ditto.
III.	.....	4	8 0	4	0 0	Ditto ditto.
IV.	.....	4	0 0	3	8 0	Ditto ditto.
		3	8 0	3	8 0	Ditto ditto.

Lands under perennial irrigation were also examined, and some few alterations have been made in the rates; the result being embodied in the general statement regarding the revised assessment.

4. As explained by Lieutenant Doig, the revision operations have effected a reduction of thirty-five per cent. on the assessment fixed by Captain Haig, that is to say, the total Jumma as now settled amounts to Rupees 1,08,509, whereas it was Rupees 1,47,368, as imposed by that Officer. It is shown, however, in the comparison of results instituted by Lieutenant Doig, that the New Jumma is about 14 per cent. in excess of the average collections of the past five years, and it appears too from the Collector's report upon the remissions granted this season, that it nearly corresponds with the sum fixed, after a careful inquiry, for the current year's revenue of the districts.

5. These several comparisons tend to show that the district can pay the revised assessment now fixed. The reduction made is intended to cover the fluctuations to which Sailab cultivation is ordinarily subject from a high or low inundation season, and I trust we shall have no occasion for remissions on this account in future. It is scarcely possible, perhaps, to dispense with them altogether in a country subject to disastrous floods, and visitations by locusts, but they ought certainly to be required only in cases of special calamity of the above nature.

6. In my former report on this subject the causes to which the defects in the original settlement are attributable have been fully explained, and I regret to observe that the classification has been found to be more faulty than it was supposed to be. I need not, however, allude further to this subject, but would merely observe that I am satisfied that the revised classification has been carefully executed under Lieutenant Doig, assisted by Mr. Wilkins, Assistant of the Left Bank Survey, who was transferred temporarily to the Kurrachee Collectorate for this duty. I can, therefore, confidently recommend the settlement for sanction.

7. In respect to the revision, the Collector has raised the question as to whether the fact of a guarantee of the former rates having been given for ten years, does not preclude our levying any increase on the said rates during the period for which they were sanctioned. The maximum rates now imposed, as has been already shown, are a decrease on Captain Haig's rates, but there are cases in which the assessment of individual fields has been increased, owing to a low and incorrect standard of valuation having been adopted in the original classification. The Collector doubts whether we can levy the increased assessment in these cases.

8. Section XXX. of the Survey Act, which bears upon the case, precludes the levy of a revised assessment based upon a fresh survey or classification of soils until the expiration of the period for which a settlement may have been guaranteed. But this rule forbids not merely the levy of the increased but of the reduced assessment also. I don't think the cultivators would object to the payment of the revised assessment on the grounds here alluded to.

but perhaps it may be well to place the matter beyond the chance of dispute.

9. I would propose, therefore, that a Proclamation be issued in the district, to the effect that in consequence of complaints of the manner in which the rates were fixed at the original settlement made in 1864, the Commissioner had directed a fresh classification, and a revision of the assessment of the district, notice is therefore given that the new assessment will be levied from the current year to the expiration of the lease.

10. Or, if this is not approved of, the original lease might be declared to be cancelled, and a new one granted for ten years. Either course would do, supposing it is thought necessary to take steps in the matter.

11. With regard to the Bard and Dingree Bunds, it appears from the Collector's letter that he has inquired into the matter, and written to the Canal Engineer about these Bunds.

Paragraphs 12 to 14 of  
Lientenant Doig's Report.

But until some arrangement can be made for superseding the present plan of allowing the two sluices to be opened in alternate years, it will be necessary to allow yearly remissions for the lands which derive their water supply from the closed Bund. The Collector's proposal to estimate the remission at two-thirds of the fixed assessment seems fair, and I would recommend the plan being continued until the improvements in the sluices alluded to above can be carried out.

I have the honour to be, &c.,

J. T. FRANCIS, Major,

Survey and Settlement Commissioner.

*Poona, 17th July 1866.*

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Forwarded through the Collector for any observations he may wish to make.

J. T. FRANCIS.

No. 4 OF 1866.

## REVENUE DEPARTMENT.

To the SURVEY COMMISSIONER.

SIR,—I have the honour to submit a Report on the revised assessment of the villages in the Sehwan Talooka noted in Appendix B of your instructions No. 76, dated 4th February last, the re-classification of which has been completed.

2. The appended Statement in detail will, I trust, lay the result of the revision clearly before you. \*

3. The following points call for remark. In twelve villages the percentage difference between original and revised assessment (including in the latter the assessment on lands that have been long out of cultivation) is great. In the Dehs of Boobuck, Soopur, Gaber, Arbee, Kote Baroch, Trenee, Abrah, Khubrote, Bootra, Sehwan, Maliccota, and Kurrumpoor, there is a large amount of waste or much inferior Sailab land, which necessitated considerable reduction in classification.

4. Notwithstanding the reduction in the Jummas caused by this revision, the Dehs of Soopur, Arbee, Kote Baroch, Khubrote, Bootra, Punjota, Khundewarce, Chunna, Sehwan, Hydrance, Sunpall, Maheeota, Sangpoor, Tundro Shah Bazee, and Arazee, still work out much over the average of past years, but they have been under light leases, or generally enjoying low rates; for instance, most of the area of "Khubrote" was under a lump assessment of one Rupee per acre to Bhawul Khan<sup>3</sup> Rhind for some years.

5. Arazee and Tundro Shah Bazee are almost entirely Churkee Dehs, and consequently not much affected by the revision.

6. The river having carried away a good deal of land in Kurrumpoor, its revised assessment is only a trifle over past averages. This Deh being annually subject to encroachments of the river on one side, and new land thrown up on the other, no dependence can be placed, as far as comparison goes, on the statement of its past realizations.



7. Abrah is a very small Doh in a corner between Boobuck and Billum, enjoying no superior advantages either as regard soil or water supply; still, though only growing inferior crops, it has paid highly during past years, owing, I think, to their being many cultivators, and the high rates prevailing in the adjoining Doh of Boobuck having been exacted. It cannot be classed higher than it now has been, as the Sailab is natural overflow unaided by either Moke or wheel, and I don't think it would be advisable to increase the maximum.

8. The village of Dero Hyatt has been excluded from the Statement appended, their being only a few perennial wheel numbers that had to be altered.

9. With reference to paragraph 6 of my letter No. 3, dated 27th ultimo, small "Khatas" may again have been unavoidably increased, but I think it will be found to no great extent.

10. Agreeably with paragraph 9 of your instructions, the three Dohs of Billum, Joohoo, and Bagh Yussuf, at present under lease, have been classified *de novo*, and their assessment calculated at the revision maximums. The result is shown, for your consideration and approval, in the accompanying Statement. The maximums seem to suit these Dohs remarkably well.

11. The Jummas of the twenty-four Dohs under report have been reduced in the aggregate 35.2 per cent., and stand 14.3 per cent. above past averages. But when you take into consideration the "Bezarees," that, as a matter of course, are likely to be given, the assessment actually collected will not be so much over past averages; on the other hand in many cases the amount of waste bearing a light assessment will most probably be taken up, and prove a steady increase to the revenue. I have every reason therefore to think that the present revised settlement, if confirmed, will be found to work satisfactorily, be regarded as equitable by the people, and obviate future necessity or calls for remissions.

12. The question of the Bard and Dingeree Bunds is rather a difficult one, and might be definitely settled by the Engineering Department. I may, however, here notice in brief that these Bunds benefit Dohs on the one side and damage Dohs on the other, as they come into force respectively.

13. The accompanying rough sketch will, I hope, illustrate the following remarks.

The Nara at A separates into two channels, which bear a multitude of names as they go along, till they unite at B, and become the Nara again. At C the Dingeree Bund is erected, which throws the water down the Païrdooaree Canal, and at D the Bard Bund is situated, which checks and throws back the water into the Makkee Canal.

In the time of the Meers both these Bunds were put up every year; of late it appears to be the custom to open the Bunds alternately every two or three years, to give a passage for boats and supply the Munchur.

A sudden depression occurs about the line of the Bunds whence the water descends with a rush into the Munchur; hence the object gained by the bunds is that the water is checked and thrown back till it rises, say to the level of E, when it acquires sufficient headway, and goes off into the Païrdooaree, and waters the high lands; and the same with the Bard Branch.

14. The existing arrangement of opening the Bunds alternately will only entail constant remissions, as the irrigation is thus entirely changed from good Rice Moke to inferior Moke-Churkee, or total waste.

15. Masonry Bunds with sluices, or side escapes, and with lock gates to pass boats, appear the best solution of the difficulty; a plan that, it will be found, will meet with the approbation and co-operation of the Zemindars. This arrangement would enable the people to get a sufficient supply of water under control from both Bunds to flood their lands, which, when no longer required, could be let off; and it would also not be open to the objection of altogether stopping the supply of water to the Munchur.

I have the honour to be, &c.,

A. DOIG, Lieut.,

Deputy Settlement Officer,  
Right Bank Districts.

*Camp Billion, 24th March 1866.*



*Revenue Survey and Assessment.*

No. 4472.

## REVENUE DEPARTMENT.

*Bombay Castle, 1st December 1866.*

Letter from the Acting Commissioner in Sind, No. 217, dated 12th November 1866—Submitting copies of correspondence relative to the introduction of Survey Rates into the Schwan Talooka of the Kurrachee Collectorate, and requesting sanction, in accordance with Section 25 of the Bombay Act I. of 1865, to the proposed settlement.

**RESOLUTION.**—The revised rates are sanctioned.

2. His Excellency the Governor in Council is decidedly of opinion that the guarantee given by the Commissioner must be upheld in the case of land now under cultivation, except in cases where the aggregate amount of a Ryot's assessment is below that guaranteed in the first instance. For example, if the total amount of a man's rental under the original settlement was Rupees 100, and under the revised one only Rupees 90, there is no objection to readjust the assessment on particular fields, even though in some instances the rent may have to be increased. In the case of all lands to be hereafter given in cultivation the revised rates should be enforced, whether in excess of or below the previous ones.

3. The requisite corrections should, as suggested by the Acting Commissioner, be made, not by proclamation, but in the account of each individual. This duty should be personally superintended by the Collector and his Deputies.

Chief Secretary to Government.

To

The COMMISSIONER in SIND.



**SELECTIONS FROM THE RECORDS OF THE BOMBAY  
GOVERNMENT.**

No. CIV.—NEW SERIES.

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**SELECTED MINUTES**

BY THE

**HONORABLE MOUNTSTUART ELPHINSTONE,**

IN THE

**MILITARY DEPARTMENT.**

1820-1827.



**Bombay:**

PRINTED FOR GOVERNMENT

AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.

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1867.



# SELECTIONS

FROM THE

MINUTES OF THE HON. MOUNTSTUART ELPHINSTONE.

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## MILITARY.

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### REVISION OF MILITARY SALARIES.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

*Dated 25th August 1820.*

I have been led, by the numerous applications from Officers of the Staff for an increase to their salaries, most of which appeared extremely well founded, to examine the allowances of that branch of the Army, with a view to augmenting their pay when it is necessary, as well as to reducing the expense when it may be practicable.

The result has convinced me that an increase is required in justice to many departments, from the change of circumstances since the present scale was fixed, especially as the establishment allowed to Officers was in some cases taken into account in fixing their salaries, so that their allowances have actually undergone a reduction by the operation of the late orders for regulating establishments.

To show the changes which have taken place, it is only necessary to contrast the strength of the Army and the charges of the Presidency in 1796 and 1820.



The strength of the Bombay Army, King's and Company's troops, in 1796 was —

Rank and file	...	...	...	...	...	11,718
In 1820	...	...	...	...	...	33,740

Increase... 22,022

The fixed charges in 1795-96 amounted to...	Rs.	45,08,741
In 1818-19	...	87,71,406

Increase...Rs. 42,62,665

The war or contingent charges of 1795-96		
were	...	Rs. 5,26,862
In 1818-19	...	57,55,286

Differenco...Rs. 52,21,424

The revenues of Bombay in 1795-96 were about.	Rs.	24,00,000
In 1818-19	...	2,05,00,000

Increase...Rs. 1,81,00,000

For the current official year the revenues will probably be ...Rs. 2,20,00,000

If the allowances were to be increased in the same proportion, they would require at least to be tripled; but as such an exact proportion is not at all required, the principle I first adopted was, to affix a salary to each appointment according to its absolute importance and responsibility, without drawing any comparison either with other times or other establishments.

Lists were accordingly prepared on this principle, which appeared, when laid before me, to be reasonable in themselves. I however thought it necessary to compare them with the allowances at Madras, and the result of this comparison, as well as my anxious wish to attend to economy, was my reducing them very considerably below those of the Presidency of Fort St. George.

The only instances in which I have allowed them to approach to the scale of that Presidency, are the Auditor General and Com-

missary General. Both of these offices are so responsible, the good administration of both is so essential to economy, and the former is so particularly invidious, that I do not think the sums I have proposed can be reckoned excessive. The rest are so moderate, as almost to speak for themselves. I have therefore contented myself with exhibiting in the accompanying paper, Section **A**, the allowances of each appointment in Bengal and Madras, those now in existence here, those proposed, and the increase of expense they will occasion.

The whole increase is only about Rs. 1,39,719.

They are in all instances on the lowest scale consistent with the nature of the offices. The subordinate appointments in particular are kept very low, as the increase in the value of the higher is itself an advantage to the expected successors.

The Regimental allowances, whether of the Officers Commanding Battalions or of the Staff, should be fixed on the same scale as those of Madras and Bengal (if that be not already the case) ; such I understand is the wish of the Court of Directors.

Battalions being of the same strength, the duties and responsibility are the same, and the troops of different Presidencies being now more than ever liable to meet on the same service, no difference should exist in their allowances.

The necessity of increasing the allowances of Officers Commanding Battalions has already been submitted to the Honorable the Court of Directors, and is of essential importance to the discipline of the Army, by fixing Officers in Command of Battalions, who would otherwise be constantly drawn off by the wish to obtain Staff appointments.

The arguments in favour of equalizing the Regimental allowances of the three Presidencies, applies to Officers Commanding Brigades and to Brigade Staff.

In looking to the reductions which may be practicable, it appears at first that little remains to be done ; the two revisions which the Military Establishment has undergone in the year 1799 and 1807 having reduced it to the lowest scale. Some saving

however may still be made, and some other arrangements adopted that will increase the efficiency of the Army without adding to the expense.

The first point to consider, is the Military Divisions into which the country is formed, in which the following improvements may be introduced :—

#### *Northern Concan.*

The Concan being a narrow slip of country, with not above three Battalions scattered over it, it does not appear requisite that it should be divided into two Commands, while it would appear inconvenient, from its extreme length, to form it entirely into one.

From the Damaun River to Bancoot River may conveniently be attached to Poona Division, from which, in cases of disturbance, troops would most probably be sent, either by the Bhore Ghaut or the Passes from Joonere and Sattara, into the low country.

This tract would not require any particular Staff or Commandant. The Officer Commanding there would merely, as in other places, comply with the requisitions of the Civil authority for Military assistance, and make his reports to the Officer Commanding the Poona Division.

#### *Southern Concan.*

The tract of the country from the Bancoot River to the Portuguese territory at Goa, lying at a greater distance from Poona and Bombay, it may be convenient to have a Commanding Officer on the spot to refer to, and his having a Brigade Major attached to him would be sufficient Staff for all the duties of the Southern Concan.

#### *Poona Division.*

This Division may comprise the conquered territory above the Ghauts (omitting Khandeish) and the Concan, as far south as the river at Bancoot.

It should be, as at present, a General Officer's command.

*Province of Guzerat, Northern Division and Baroda Force.*

It would be convenient to divide these Commands, so as to leave the West and the frontier towards Sind to one, and the East and frontier towards Malwa to the other; but from the manner in which the Guicowar territories are distributed, this could not be done permanently without breaking up the subsidiary force. It seems therefore best to leave these commands in their present state, although attended with some inconvenience.

*Province of Guzerat.*

As the Baroda force, which cannot be placed under the General Officer Commanding the Province, is so much intermixed with that of the Northern Division, it will be convenient to remove that also from under the Command of the General Officer, who will now receive Khandeish in addition to his present Command. The multiplication of papers and delays of communication will also be saved by this arrangement.

The deviation may then be designated the Surat Division of the Army.

*Southern Division of Guzerat.*

The beforementioned arrangement under this Command (which is at present merely nominal) is unnecessary.

The troops under it would be added to those in Khandeish, and the head-quarters fixed at Malligaum.

*Cutch.*

Might be retained as a small Government command, an active Officer being selected to hold it.

It will now be necessary to observe the appointments liable to reduction upon this plan :—

Southern Concan ..... 1 Paymaster.

1 Artillery Officer in charge of Ordnance.

	1 Superintending Surgeon, whose duties might be performed by the Superintending Surgeon of the Presidency.
Poona Division .....	1 Brigade Major to the Officer Commanding the Division. 2 Superintendents of Bazaars. 1 Field Post Master. 1 Inspector of Hill Forts. 1 Quarter Master of Brigade at Poona.
Khandeish .....	1 Assistant Adjutant General. 1 Assistant Quarter Master General. 1 Paymaster. 1 Superintending Surgeon. 1 Persian Interpreter.
Guzerat .....	1 Officer Commanding the Southern Division.
Surat .....	1 Barrack Master.
Broach .....	1 Commandant. 1 Fort Adjutant. 1 Deputy Medical Storekeeper.
Kaira .....	1 Barrack Master.

The Adjutants of Battalions acting as Paymasters, it appears unnecessary, especially within the Company's territory, to attach a General Paymaster to two or three Battalions; the abstracts may be sent to the nearest Division Paymaster, who will return bills on the Collector, or escorts may be sent for it to the nearest Presidency. This particularly refers to the Southern Concan, and I should write a reference to the proper authority, to ascertain whether it could not be adopted there, or whether it would be more convenient to put the payments under the Paymaster at the Presidency.

The practice of placing effective Officers in filling permanent commands, such as Anjar, Broach, Sholapoor, &c., appears objec-

tionable; I therefore propose that all appointments of that description be done away, and that a list of the commands be submitted to Government, to enable it to select such as are to continue.

Tanna should be made an Invalid Station, and commanded by an Invalid Officer. The Fort Adjutant should also be an Invalid Officer, and all small commands of such a nature that may be absolutely necessary, should be given to disabled or Invalid Officers.

Bazaar Masterships and Barrack Masterships at the outstations may be transferred to the Commissariat Officers.

With regard to Sub-Assistant Commissaries, it does not appear requisite that one should accompany every petty detail of Europeans, and I should conceive, that in many cases the duty could be more creditably assigned to intelligent Conductors of that Department.

The same observation applies to the Artillery Officers being nominated Assistant Commissaries of Stores upon every trifling occasion.

The Staff of the Bombay Army on the proposed footing would probably be as follows:—

*Bombay.*

As at present.

*Tanna.*

As at present, with the exception of having Invalid Officers there instead of effective ones.

*Poona Division.*

- 1 Major General.
- 1 Aide-de-Camp.
- 1 Assistant Adjutant General.
- 1 Ditto Quarter Master General.
- 1 Interpreter.
- 1 Deputy Commissary of Stores.
- 1 Assistant for Sholapoor.

- 1 Deputy Commissary General.
- 1 Assistant ditto Sholapoor.
- 1 Sub-Assistant ditto.
- 1 Superintending Surgeon.
- 1 Medical Storekeeper.
- 1 Paymaster.
- 1 Deputy or Assistant.

*Poona.*

- 1 Commanding Officer.
- 1 Brigade Major.

*Sattara.*

- 1 Commanding Officer.
- 1 Brigade Major.

*Sholapoor.*

- 1 Commanding Officer.
- 1 Brigade Major and Officer from the Staff of the Division above referred to.

*Ahmednuggur.*

- 1 Commandant.
- 1 Commanding Officer.
- 1 Brigade Major.

*Surat Division.*

- 1 Major General.
- 1 Brigade Major.
- 1 Aid-de-Camp.
- 1 Major Commanding the Garrison of Surat, the senior Officer of the troops stationed there.
- 1 Fort Adjutant, Surat.
- 1 Assistant Commissary of Stores.
- 1 Assistant Commissary General.
- 1 Garrison Surgeon and Medical Storekeeper.
- 1 Superintending Surgeon.
- 1 Deputy Paymaster.

*Broach.*

- 1 Officer Commanding the Detachment stationed there.
- 1 Assistant Surgeon.

*Khandeish.*

- 1 Officer Commanding.
- 1 Brigade Major.

*Baroda Subsidiary Force*

- 1 Colonel Commanding.
- 1 Assistant Adjutant General.
- 1 Ditto Quarter Master General.
- 1 Assistant Commissary of Stores.
- 1 Second Assistant when the Force is in the field.
- 1 Assistant Commissary General.
- 1 Sub-Assistant \* ditto.
- 1 Superintending Surgeon.
- 1 Medical Storekeeper.
- 1 Deputy Paymaster.
- 1 Assistant ditto.

*Northern Division.*

- 1 Officer Commanding.
- 1 Brigade Major.
- 1 Assistant Commissary General.

*Kaira.*

The Senior Officer of the Troops there Commanding.  
A Cantonment Adjutant.

*Cutch.*

- 1 Commanding Officer.
- 1 Brigade Major.

If these arrangements be approved, it will remain to consider what part will require to be carried into effect immediately.

In the mean time I strongly recommend that the whole plan be kept secret, as the disclosure may tend to disappointment, even to discontent.

25th August 1820.

M. ELPHINSTONE.



## STATION COMMANDS.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

*Dated 2nd October 1820.*

I think Broach and Anjar might be abolished as Station Commands and left to the Senior Officer of the Garrison.

Sholapoor and Bancoot having Invalid garrisons, should be made Invalid Commands.

I am however doubtful whether it may not be convenient to retain such command as a provision for such field Officers as would otherwise do mischief at the head of their Battalion.

It is a question whether the convenience of this plan, or the evil of holding out a reward for inefficiency is the greatest, His Excellency the Commander in Chief will perhaps favour the Board with his opinion on this subject.

At all events, none of the appointments need be abolished till they fall vacant.

MOUNTSTUART ELPHINSTONE.

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## IMPROVEMENT IN THE INVALID ESTABLISHMENT.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

*Dated 2nd October 1820.*

The improvement I have to suggest in the Invalid Establishment, goes no further than that there should henceforward be a Pension List distinct from the Invalid Battalion. The latter should remain on its present footing; but no Officer should be admitted into it without the most satisfactory certificate from his Commanding Officer of his good character and conduct. The Pension List, again, should be a receptacle for such persons as are unworthy to remain in the Army, but whom it would be inhuman to deprive

of all subsistence. These last might receive somewhat less pay than the Invalids, and should have no command and no military charge.

The whole of the present Invalid Battalion should remain as at present, but Officers belonging to it, who should hereafter misconduct themselves, would be liable to be transferred to the Pension List, in the same manner as Officers on the effective list. The Officer Commanding the Invalid Battalion should, in such a case, show no forbearance to the views of the Officers under him, but exercise the same vigilance as an Officer Commanding an effective Battalion, and take pains to clear his corps of every disgraceful member, either by Court Martial, or by compelling the offender to retire to the Pension List. Officers of merit, disabled by wounds or sickness, will then no longer be liable to be confounded with the outcast of the Service. His Excellency the Commander in Chief will probably be able to enlarge and improve on these hints if they should meet his approbation.

MOUNTSTUART ELPHINSTONE.

*2nd October 1820.*

## APPOINTMENT, SUPERINTENDENT CAVALRY.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

I formerly withheld my consent to this measure, because I conceived the two Regiments of Cavalry were completely disciplined (although I was surprised at the time in which it was effected), and that although it might therefore be very desirable to appoint a Superintendent or Inspector, it was not "absolutely necessary."

I infer from His Excellency's present letter, that the former two Regiments, though fit for duty, are not in the high state to which they might be brought by the superintendence of an expe-

rienced Officer, and that unless we give them that advantage, we are likely to have inferior Cavalry as long as we have an Army. I observe also, that His Excellency is of opinion, that the 3rd Regiment is not likely to be fitted for duty without some step like the present; for these reasons I now acquiesce in a proposal which I formerly thought might be dispensed with.

The examples of Bengal and Madras are not in point; the Cavalry of both of these Establishments was raised gradually, and it never was a question with either, whether they should leave these Regiments to take their chance of instruction, or secure it at once to them by the appointment of an Inspector. When such an appointment was made in favour of Colonel Gillespie, the Madras Cavalry was in its highest state of perfection.

MOUNTSTUART ELPHINSTONE.

## APPOINTMENT, SUPERINTENDENT CAVALRY.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

My former Minute having been founded on a construction of His Excellency the Commander in Chief's letter, which proves to have been erroneous, I have again examined the question.

1. If the 1st and 2nd Cavalry are now completely formed, officers and men, the chance of their falling off for want of proper superintendence, would not appear to me sufficiently great to render the appointment of an Inspector indispensably necessary.

2. On the other hand, if they are now in such a state as to render it probable that they will get into a loose or bad system if entirely left to themselves, I shall most cordially subscribe to the appointment of an Inspector. There are but two ways of providing for the 1st and 2nd, the aid of Colonel Stanhope's superintendence—the first is, to move them within the sphere of his com-

mand ; and the second, to give him the power to visit and control them out of his immediate command. Of the two, the latter is decidedly preferable, as the two Regiments cannot, without great inconvenience, be withdrawn from their stations.

3. Supposing both the older Regiments independent of Lieutenant Colonel Stanhope's aid, we have still to consider the case of the 3rd Regiment.

I cannot think it at all reasonable that Colonel Stanhope should be expected to undertake the complete formation of the 3rd Regiment without a recompense. Had the question been put, when he began to discipline the two former Regiments, whether he should or should not have an allowance, I think it would certainly have been decided in the affirmative ; but the question was never put : the Lieutenant Colonel began at once, and completed the Regiments for service without any reference regarding the mode of remuneration. A donation was then ordered for him, I think, about equal to the pay he would have received for the time he was employed, at 1,500 rupees a month. We have now an opportunity of deciding before his duties are completed, and I would propose that he should have an allowance of 1,000 rupees a month for the whole time actually employed in disciplining the 3rd ; but in that case he could not be made Inspector, a title which could only be conferred on an Officer having charge of the whole Cavalry.

Whichever of these plans His Excellency the Commander in Chief shall consider to be necessary under the view that I have taken of the subject, I shall readily concur in ; but it is impossible to appoint an Inspector, without its appearing that the present Officers are insufficient to raise their Regiments to the highest state of efficiency, or else to retain them in that state when already raised to it.

MOUNTSTUART ELPHINSTONE.

## APPOINTMENT SUPERINTENDENT CAVALRY.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

This being the case, I see no choice but to make the appointment. We cannot allow our young Cavalry to be neglected for the sake of avoiding the expense of an appointment of acknowledged necessity, and we cannot refer to the Court of Directors, because the period during which the appointment is required must expire before we receive the Court's answer, as the appointment must be confined in point of time to the period for which it is strictly necessary; and His Excellency the Commander-in-Chief may be requested to announce the time when he conceives the discipline of the Cavalry is independent of such assistance.

MOUNTSTUART ELPHINSTONE.

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## COMPENSATION TO NATIVE ARMY FOR HIGH PRICE OF GRAIN.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

The arguments on both sides of this important question are brought forward in the Minutes of the Auditor General and Adjutant General with remarkable clearness and ability. The substance seems to be this—

The Auditor General proposes that a sepoy should never spend more than two Rupees a month on his food; the Adjutant General never more than one and a half.

The Auditor General wishes to keep the condition of the sepoy as it stands. The Adjutant General wishes to improve it in some degree.

The Auditor General's argument rests on the supposition that the Army has gone on well hitherto. The Adjutant General

maintains that this cannot be admitted without considerable reservation.

It was unnecessary for the Auditor General to prove the success of our military system on the whole, which is sufficiently apparent; but the Adjutant General has shown beyond dispute, that in some respects it has been remarkably unsuccessful, and I think he has traced the case of our failure to the disproportion between the pay of the sepoys and the price of provisions.

The alleged disproportion is combated by the Auditor General on the ground of the superiority of the pay of a sepoy over that of a labourer, but this superiority is denied by the Adjutant General, and may be rendered null by comparing the excess of a Bombay sepoy's pay over that of a labourer in these provinces, with the excess of the pay of a sepoy over that of a labourer in Bengal or Madras.

After considering the arguments on both sides, I concur entirely in the opinion of the Adjutant General. I should do so even if the question were to be considered without reference to any external circumstance; but there are many considerations which weigh in favour of the Adjutant General's plan, besides those I have abstracted.

Our troops are liable to serve with those of Bengal and Madras, and it is important that they should find no advantage in the situation of those troops so obvious as to render them dissatisfied with their own.

For this reason, as well as from other considerations of justice and policy, the Honorable the Court of Directors have ordered that "the Regulations relative to the subsistence of the Native soldiery should be as uniform in all parts of India as circumstances will admit," and there is no circumstance in this case to prevent a more complete equality than at present exists. It is true that our common bazaar prices are much higher than those of Madras, but it cannot be maintained that, because our sepoys cannot save like those of other Presidencies in seasons of plenty, they are not to have the same protection against seasons of want.

These arrangements would all apply if things were to remain on their present footing, but as we are about to reduce the field allowances in the Deccan, the situation of the soldier would be greatly inferior to what it is at present, if no such relief were afforded. I think if this part of the subject had been known to the Auditor General, that the same honorable attention to the public interest which has led him to oppose what he considers an unnecessary expenditure, would have induced him to support a general change which is at once equitable towards the sepoy and profitable to the public. It cannot be doubted that the diminution in the number of desertions in late years has been in a great measure owing to the increased proportion of the troops who have been on field allowances, when these are reduced below even their ancient standard, while the greatest encouragement is held out to agriculture, we can scarcely expect but that the old disposition to desertion will revive and increase. It may be said, that as we now possess the country from which our recruits are brought, we shall always have the means of recovering deserters and of putting a stop to the offence. This, however, is an exertion of our power which I never desire to see; on the contrary, I think the possibility of our Government at some future period shutting up this wholesome vent for disaffection, is an additional reason for endeavouring to remove every motive for discontent among our sepoys.

In England, where a man will bear much before he will raise his hand against his king and country, the principle of compulsory service may be tried, not with perfect safety, as is shown by the mutiny of the Navy, but without imminent danger; in India, on the contrary, it can never be attempted without risking our empire. Almost our only hold on our sepoys is derived from good pay and good treatment; if either of these sources of attachment seem to them to be withdrawn, the least evil we have to dread, is that they will quit our standard. It is not difficult to see what would have been the result of any dangerous crisis if we had been able to retain in our ranks the 28,000 malcontents who deserted within ten years. The evils of the frequent loss of disciplined men are apparent, but they are not equal to those of a disaffected Army, I

am therefore of opinion, that no notice should even be taken of desertions, except to discover and remove the cause (whether general or partial), and I think it a wise proposal of the Adjutant General, to make the greater or smaller number of desertions the test of the fitness or unfitness of the present measure.

For the above reasons I concur in the opinion of the majority of the Military Board, that we ought to adopt the Madras standard for rice. I think we should adopt the standard of 15 pukka seers the rupee for wheat flour, to enable our troops to meet those of that Presidency on an equal footing, and that we should calculate a rate for bajree on the following principles. We should first ascertain the nutriment contained in it compared to rice, that is, how much of each will do for the daily subsistence of a man; we should then make a large deduction from the price of bajree, because, as almost all our sepoy's eat rice, and it is a hardship for them to be reduced to bajree, they should find some compensation in the comparative cheapness of the latter grain. Supposing the price proposed by the Adjutant General to be adopted, the rule would then be, that as long as rice of the third sort could be bought at 37½ lbs. the rupee, or wheat at 30 lbs. (15 Bengal seers) the rupee, or bajree at 47 lbs., the sepoy's should not receive compensation, but they should be entitled to it when all three grains should exceed their respective regulated prices. These prices should be avowedly experimental, as suggested by the Adjutant General; they should apply alike to troops on field and garrison allowances, and they should be applied under the direction of a Committee, as recommended by the Auditor General, except in case of small detachments, where some other must be fixed on. Followers may receive compensation on the principle recommended by the Auditor General.

If these principles appear correct to the Members of Government, the Military Board may be directed to draw up a regulation conformable to them, and may be requested to furnish it early, it being desirable that it should be published at the same time with the order doing away with field allowances in the Deccan, and that order should be published by October 1st and carried into effect on the 1st of December.

MOUNTSTUART ELPHINSTONE.



## COMPENSATION TO NATIVE ARMY FOR HIGH PRICE OF GRAIN. BAZAARS REGIMENTAL.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

The important subjects referred to in these letters, have been very fully and ably discussed, and have been decided on by the Military Board with great judgment and discrimination. I concur with the suggestions of that Board in almost every particular, but I shall nevertheless remark on each subject in its order.

1st.—I entirely agree with the Board as to the expediency of keeping the charge of the Bazaars separate from the Commissariat.

2nd.—With regard to Brinjaries; as Sir J. Malcolm does not propose depending on them alone, and only mentions them as one of four modes of supply, it does not seem necessary to discuss their merits.

3rd.—On the important subject of compensation I concur with the Military Board and with Sir J. Malcolm. I think the present plan of granting occasional relief objectionable on various grounds; it encourages complaints, since no remedy is afforded until the evil is represented, and it leads to discontent, as the sepoy may complain in cases where Government does not think it necessary to afford relief; it exposes the sepoy to anxiety, as he does not know exactly what he is to expect, and it subjects him to temporary distress while his difficulties are undergoing a reference and a discussion at the Presidency. It is much better for Government to provide for all cases by an order suggested only by its own foresight and its attention to the interests of the sepoy. I doubt, however, whether the time for affording compensation ought to be fixed by the price of *rice*. The Military Board are perhaps the best judges on this subject; but the difference between the pay actually received by the sepoys during a period in which there were no complaints, and that they would have received on the Madras system (Rupees 95,200 a year), appears to me to show that

the price of rice cannot be adopted as a real index of the rate at which the food of a Bombay sepoy can be procured.

On the other hand, it may perhaps be found that the prices of the different dry grains rise and fall together, and that the same rule that was calculated for hajree would also answer for wheat ; or if there be any one grain (hajree for instance) on which all classes occasionally subsist, it would be no hardship to confine the compensation to times when that grain was not to be had at a moderate price. Should neither of those suggestions be unobjectionable, perhaps some scale might be settled, founded on the average price of the three sorts of grain principally consumed.

The subject might be again referred to the Military Board, by whose amended opinion I should have no objection to be guided, and the Board might at the same time be directed to prepare an order rendering compensation permanent. •

The Board might be requested to provide in this regulation the means of ascertaining correctly, by a Committee or otherwise, when compensation really becomes due, which perhaps ought only to be when the price on the average of a whole month was above the standard fixed by Government, and it might be recommended to them to be cautious in allowing compensation to followers, especially in cases when their pay may exceed the proportion which it ought to bear to that of the fighting men.

4th.—I shall make no observations on bazaars until the promised regulations are submitted by the Military Board, except that if bazaars were formerly desirable, they appear to be rendered absolutely necessary by the late orders depriving the Magistrate of the power of pressing for the aid of troops in motion.

5th.—The Code of Commissariat Regulations (B) has not been furnished. The object of the Enclosures 7 and 8 is not apparent. If they contain an answer to the inquiries of the Supreme Government, at the time when it was considering the propriety of prohibiting the pressing of Coolies, they will be too late, the question having been long since decided. The information they contain also would scarcely have been sufficiently minute to have been useful for that purpose.

6th.—I may here also observe, that I concur with the Military Board in opinion as to the propriety of confining all immunities from customs on grain and other articles of food to registered and regulated camp dealers, and that I hope the Board will incorporate the manner of exercising the proposed control with the objects embraced by the Bazaar Code now under consideration. They will also, I hope, devise effectual means of checking all frauds by which the proposed immunity can be extended to others besides the dealer for whom it is designed. It may be a question whether some more direct mode of remuneration to camp dealers might not be devised, which would afford them the benefit they now derive from exemptions, without exposing Government to indefinite losses by fraud and collusion.

#### MOUNTSTUART ELPHINSTONE.

Since I wrote the above Minute, I have seen the proceedings in 1819 on the separation of the Bazaars and the Commissariat, and a knowledge of the doubts entertained, induces me to say more than I at first intended on that question. I conceive the principal duties of the Bazaar Master to be to procure passports and escorts for the bazaar people, to remove all obstructions to their trade, and to carry such of their complaints as he cannot himself redress to the Commanding Officer; he should also settle their disputes about their dealings, and he may or may not be entrusted with the Camp Police. He has nothing to do with fixing prices or with directing trade, nor do I think he can ever give much useful information to the dealers, except by telling them where they are likely to fall in with the enemy, or to be anticipated by the dealers of a co-operating division.

Almost the only duty of a Bazaar Master therefore is, to protect the camp dealers, and if so, there seems little question that it is better that there should be a distinct Officer to perform it, than that the dealers should depend on the Commissary, the interests of whose department are opposed to them, and whose servants they have most to dread as rivals and oppressors.

It is urged as an advantage, that the Commissary can influence the bazaar ; but it is exactly to prevent that influence that I recommend a separate Bazaar Master. I see no occasion in which he can influence it beneficially, except by issuing public grain on very great emergencies to the dealers, which should never be done but by express orders from the Commanding Officer, for which purpose it is better the offices should be separated than united. So far from wishing the Commissary to influence the bazaar, I should wish him never to purchase in it, or within the immediate range of the petty dealers belonging to it.

Most of these remarks apply to a foreign territory, and I am not prepared to say whether there are equally strong reasons for the employment of a Bazaar Master within our old provinces ; but where there is any duty of this nature, I think it would be better done by any other Officer than the Commissary.●

With regard to the check afforded by the Bazaar Master on the Commissary's accounts, I consider it of less consequence than the check on the malpractices of his servants, but still I think it useful. It does not signify whether the Bazaar Master be better or worse paid than the Commissary. It is not the Bazaar Master who checks the Commissary's accounts ; it is the record of the actual prices of articles in a free bazaar. Such a record could not in all cases be obtained if the bazaar were under the Commissary ; but it will as long as it is under any Officer who has no inducement to influence or to misrepresent it.

This incidental advantage of the separation of the offices is as beneficial to the Commissary as to the public, it enables him to detect the impositions of his servants, and it gives proof and publicity to his own integrity.

MOUNTSTUART ELPHINSTONE.

## COMPENSATION TO NATIVE ARMY FOR HIGH PRICE OF GRAIN. BAZAARS REGIMENTAL.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE,  
DATED 2ND NOVEMBER 1821.

I concur generally in the Bazaar Regulations proposed by the Military Board.

The following remarks however occur to me on perusing the draft :—

Regimental bazaars will be very useful to Battalions and Detachments moving from station to station (when bazaars of some sort seem indispensable). They will bring in grain and other articles from the villages near the halting-places, and even carry grain for a few days when the country does not supply it. But as they will employ no capital, they cannot be expected to keep up cattle enough to convey grain for a fortnight's consumption, and still less to make advances to Brinjarries, and procure grain from distant places when it may be more plentiful than near camp.

To do this requires great dealers; such can only be found in general bazaars, and as all this is required when any important movement is undertaken, the superior importance of general bazaars is apparent. It is probably this consideration that has induced the Military Board to confine the drawback to general bazaars. This distinction will probably prevent the regimental bazaars from ever flourishing, but it is impossible for both to flourish, for if each Battalion and its followers makes its purchases at its own bazaar, there will not be many left to deal with the general bazaar.

Even the general bazaar, however, can only be useful in countries that are tolerably plentiful and in some degree quiet. In jungles, during a famine, or when a country is overrun by an enemy or exhausted by the long continued presence of armies, it is evident that other means must be adopted to provide for the timely importation of grain.

For this purpose it seems absolutely necessary to employ Brinjarries (notwithstanding their excesses, which have not been

at all exaggerated), and as the Commissariat and Bazaar Departments are separate, it is a question well worth the consideration of the Military Board, to which the management of this great charge should be entrusted. The memorandum of the Madras Commissary General, forwarded to the Board by Mr. Simson on the 17th of July 1820, furnishes much information on that subject.

With regard to the drawback to be granted to fixed dealers, it would be useful to limit that benefit to articles likely to be consumed within the camp, and even to put some bounds to the quantity, as otherwise the camp bazaar would draw off the custom of the neighbouring town, and the dealers, instead of moving with the troops, would turn their chief attention to supply the inhabitants. It might perhaps be useful, instead of this last rule, or in aid of it, to make all goods exported from camp or cantonments pay duties. The drawback in cantonments should cease the moment the troops move out of them, to make it the interest of the dealers to accompany the camp.

To encourage the dealers to keep cattle, grazing grounds should be afforded to them gratis, wherever it can be done without very great inconvenience.

In examining the articles of the present regulation, the first that requires remark is Section 2, Article 6, where it seems doubtful whether obliging the inhabitants to report their sales to the Chowdry may not be a discouragement to their frequenting the bazaars.

In Section 2, Article 10, it would be better to define the fees, or to direct that the Commanding Officer should in each case ascertain the local usage and fix the fees, which should be publicly notified.

Section 2, Article 11. It would probably be expedient to oblige European sutlers to enter into engagements previously to their sutling in the bazaar, subjecting them in pecuniary matters to the judgment of a court martial, and binding them to pay a certain fine for every instance in which they may infringe the regulations regarding liquor.

Section 3, Article 1. It seems desirable to introduce into this article some explanation of the sort of Price Current expected to be kept; so far at least as to explain that it is only to be a record of prices actually paid, and to prevent the Superintendent supposing himself entitled to fix beforehand the prices at which articles are to be sold.

Section 3, Article 2. It would probably be better to declare that the Superintendent of Bazaars is expected to receive complaints at all times besides these regular sittings. When there is a separate Superintendent in particular, it is not apparent why he should not sit every day, as he has no other duty.

Section 3, Article 6. It is customary in Bengal to have a quarterly examination of the state of the bazaars by a Committee, which is probably useful in directing attention to the abuses or neglects that might spring up in such an establishment.

Section 4. The rules for the Police in this section are inconsistent with the existing Regulations. They, however, appear to me to be judicious, and I think a new Regulation should be drawn out in conformity to them. For this purpose instructions should be sent to the Regulation Committee, and the Military Board might be requested to depute one of their members to concert the proposed regulation with the Committee. The same opportunity might be taken to consider whether the powers of Court Martial or of Panchayets under Military authority should not be extended as in Bengal and at Madras, and likewise whether the sale of spirituous liquor to European troops, and generally smuggling liquors into camps, should not be made penal, as at Madras.

Our present Regulation regarding the Police of Military cantonments, was copied from the Bengal Regulation III. of 1809. That Regulation was altered by Regulation XX. of 1810, but the alteration has either accidentally or deliberately been omitted here, and it is that which it is now proposed to introduce. It has lately been adopted at Madras with some additions which are worthy of attention. The Regulation which I enclose should therefore I

think be sent to the Military Board, to consult in communication with the Regulation Committee.

That Regulation will extend the powers now proposed for the Military tribunals in some instances, but it will limit them in others, especially that of punishing all crimes not capital. The powers it does confer are not more than seem to me necessary to form the Military bazar into a separate community, exclusively connected with the camp to which it belongs.

Section 4, Article 7. It is not specified how the heads of departments are to control their own followers, though, if it is intended to invest them with any powers, it must be done by regulation, as enacted in the 53 of George 3, Chapter 155, Clause 96, Section 4, Article 12. The orders of the Court of Directors are I believe very severe, in which case they had better be mentioned more fully.

The present opportunity may be taken to repeat and enforce the orders against pressing coolies or taking supplies by force. The Regulation to be passed should also contain some effectual means for checking those abuses, and should also, as in Bengal, contain a clause for the protection of ancient or religious buildings from dilapidation or from being occupied as quarters.

Section 5. On this section I have only to suggest that smuggling be rendered punishable in troops or registered followers by Court Martial, and in other persons by the Magistrates. The contract ought to be in the hands of persons entirely unconnected with those who farm the liquor contract of the surrounding country, to prevent connivance; and for the same purposes liquor seized should be the property of the informer rather than of the contractor, to whom it is given by the Madras Regulations.

It might be an additional check on the sale of liquor to Europeans, to make the native purchasers drink it at the shop.

To assist the Military Board and the Regulation Committee in considering this subject, I annex the correspondence which has passed on it at Madras, and beg it may be returned to me when no longer wanted.



Adverting to the letter of General Smith, to which the attention of Government has been called by the Military Board, I regret to observe, that the style of that Despatch is by no means calculated to give weight to the opinion it conveys. General Smith's communication contains much information of value; but I concur with the Military Board in considering the manner in which they are brought forward is unfavorable to the dispassionate examination of the subject, and particularly unsuitable in addressing a Board of which His Excellency the Commander in Chief is President.

A copy of this Minute should be sent to His Excellency the Commander in Chief, who should be requested to give his opinion on it.

## COMPENSATION TO NATIVE ARMY FOR HIGH PRICE OF GRAIN.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

I still think there should be a separate scarcity price for each of the three kinds of grain, and not an average one for all three, as proposed by the Auditor General.

The inequality he alludes to from the Madras troops in such a station as Sholapore receiving compensation on rice will no doubt exist; but it would do so equally on the system he proposes.

With regard to making the scarcity price different in garrison and in the field, the only consideration which prevents my adopting the opinion of the Adjutant General is, that the sepoys will take the field with more reluctance if they lose any of the advantages of a garrison station by it. I should wish however to know the probable difference of expense to the public on the whole Army, from adopting the plan proposed by Colonel Leighton, and that of making the scarcity price the same in field and garrison. I wish the Auditor General to be called on to furnish at his earliest con-

venience a statement of this nature, and likewise a statement of the expense which will be saved to the public by doing away the field allowances in the Deccan.

MOUNTSTUART ELPHINSTONE.

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## COMPENSATION TO NATIVE ARMY FOR HIGH PRICE OF GRAIN.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

The difference of the two plans seems to be about a lac of Rupees, and altogether the advantages are very nearly balanced; but as it will be easy to increase hereafter if necessary, and as it is always difficult to reduce, it will be best to begin on the least expensive plan, and make the rate on field allowances less favourable than in garrison. The expense will still be about 2 lacs of Rupees. I cannot at once say what will be the total saving on the arrangement, as the Auditor General's calculation is made on the supposition that the reduction of field allowances in the Deccan is to extend to all the troops in that province. I conjecture that it will be about 6 lacs. If this opinion meet the concurrence of the Board, it may be adopted at once, and field allowances ordered to cease from the 1st of March.

Very great care must be taken in drawing up the order, to discriminate between the cases where field allowances are done away and those where they are still kept up; of the latter description, none seem to me, except the troops at Sholapoor and that part of the staff which would be obliged to move if the Sholapoor detachment moved, this seems only to apply to the General Officer and his immediate staff; but His Excellency the Commander in Chief will be best able to point out the exact individuals. Former Minutes should also be referred to. Of the offices made doubtful by the Auditor, and marked in red ink, the Surveyors should receive field allowances or otherwise, according to what may be the practice in Guzerat. The Commandant of Artillery and his Brigade.

Major must be decided on agreeably to the principles determined on about a twelve month ago. The Inspector of Hill Forts and Captain Rigby may retain their field allowances, as must Major Staunton by the terms of his appointment.

General Smith may be consulted about the expediency of reducing any of the Contingent Charges. Military Pay Masters, Post Masters, Brigade Majors, &c. at the fixed stations must go on garrison allowances. I doubt whether the Native Commandants ought, as I am uncertain what other allowance they possess, and it ought to be made a comfortable situation for a deserving old Native Officer. His Excellency the Commander in Chief I remark will probably settle most of these uncertain points.

MOUNTSTUART ELPHINSTONE.

## LAWS AND REGULATIONS.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE,  
DATED THE 10TH AUGUST 1823.

I made no remark on this despatch when I first circulated it, because, after examining all the Acts of Parliament, I thought the subject involved in difficulties which none but a professional man could remove. At the same time, as I had no doubt of our possessing the same right to make the disputed Regulation that we possess to make any other Regulation for the general government of the Company's territories, I would have preferred letting the subject sleep altogether, were it not that it would appear a culpable neglect to omit to examine a doubt pointed out to us by our legal adviser on so important a question.

The difficulties I allude to are the following:—

The only express authority the Company's Governments possess to make laws, is derived from the 13 George III. 63, 36. By that enactment the Governor General is empowered to make Regulations for the Civil Government of the Settlement of Fort

William and the factories *and places subordinate* or to be subordinate thereto; but these Regulations must be approved by the Supreme Court; they must not be repugnant to the laws of England; and they must impose no penalty higher than fine and forfeiture.

This I say is the only *express* authority given to the Company's Governments to make laws. Of the other Acts quoted by Mr. Warden and Mr. Goodwin, 21 George III. 70, 23 only empowers the Government to make Regulation for the Courts, and evidently means only for the *process* of the Courts, by the proviso that they shall not produce additional expense to the suitors; a clause that would never have been inserted had the Act been meant to convey power to take away a man's life, or alter the laws under which he held his property.

37 George III. 142, 8 enjoins the formation of the Regulations already passed into a Code, but gives no new power to pass Regulations, and contains no express acknowledgment that the Regulations said to have been passed had not been passed according to the forms, and under the restrictions enjoined by the Act of the 13 George III.

39 and 40 George III. 79, 18 extends the penalties which the Indian Governments are empowered to impose to whipping.

47 George III. 68, 3 extends the 21 George III. 70, 23 to Bombay, but expressly subject to the Regulations, provisions, and confirmations required in Bengal.

53 George III. contains nothing on the subject.

As far as the letter of the law goes, therefore, the Advocate General is in the right, and we have no legal power either to make the Regulation concerning material law, or any other Regulation for the Government of the country.

But, on the other hand, it is probable that when the Act of 13 George III. was drawn up, the framers did not know that we had taken on ourselves the Government of Bengal, or that we possessed any territory in India, and consequently it is probable

they only meant to refer to our trading settlements on the sea coast. We assumed the Government of Bengal in August 1772, and this bill was brought in in May 1773.

It is also well known, that some years before the passing of the 37 George III., a number of Regulations had been issued and formed into a Code, without the approval of the Supreme Court; some of them imposing capital and other punishments, and others entirely repugnant to the laws of England, and although it is nowhere expressed, it may clearly be inferred that these are the identical Regulations alluded to in the Act, which consequently recognizes the right of the Indian Governments to make laws; not in virtue of any specific Act of Parliament, but of the sovereign power transferred to them by the Native Princes under the authority of the British Legislature.

For these reasons, I have not myself any doubt of our power to pass the Regulation in dispute; but as it is known to be very unsafe for any man not regularly educated to pretend to understand a law, I still recommend the reference suggested by the Advocate General.

MOUNTSTUART ELPHINSTONE.

## LAWS AND REGULATIONS.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

I imagine the Regulation was resolved on before His Excellency the Commander in Chief's arrival in India; at least I do not remember its being discussed since I came to Bombay. It is a mere transcript of a Bengal Regulation, and as it has long been in force there, and cannot be altered without a great deal of reference and discussion, I think it had better be put as it stands into the new Code. Major Kennedy's doubts however, as well as Mr. Norton's, should be referred to the other Presidencies.

MOUNTSTUART ELPHINSTONE.

## ESTABLISHMENT, GUN CARRIAGE MANUFACTORY.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE,  
DATED 24<sup>TH</sup> MARCH 1824.

There are only a few observations which I shall offer now. I agree with Mr. Warden, that there is not at present the smallest occasion to advert to the future wants of His Majesty's Squadron, but I cannot agree that a Gun Carriage Manufactory can be much lower in peace than in war. There is no time during an Indian war for making Gun Carriages, and still less for sending them from the Presidency. They must all be kept ready in the field Arsenals, to wait the breaking out of future war. After a war there may be a temporary period of exertion to replace the wear and tear of the war; but I should not think any of the present permanent establishment was raised during that period. With regard to Bengal, I cannot help suspecting some accidental omission. The Gun Carriage establishment at Cossipore, near Calcutta, used to be on a considerable scale, and there is another still more considerable one I believe in the Upper Provinces at Futtyghur.

MOUNTSTUART ELPHINSTONE.

## HORSE DEPOT.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE,  
DATED 29<sup>TH</sup> APRIL 1824.

I think Mr. DeVitre's letter had better go to the Military Board before we enter on the question of establishing a dépôt for yearlings. I confess I should not myself recommend such an establishment, unless it has been found to answer on trial in Bengal or at Madras. Judging on general grounds alone, I should think it would be expensive, and that it would be difficult to judge at the age of one year how a colt would turn out.

MOUNTSTUART ELPHINSTONE.

## HORSE BREEDING.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

The public is much indebted to Mr. Warden for this plan, and I cannot agree with him that it ought to be abandoned without a much longer trial. It has only been tried four years on any general plan, the previous arrangement in Guzerat being only on a very limited scale, and it would take at least twice as long to see the good effects of it even if it had not been impeded by an accidental cause, the bad judgment of the Committees and consequent bad choice of stallions.

Under a Native Government of the extent of ours in India, there would be a demand for at least 3,00,000 Military horses, and some of them would be sought for at immense prices; while the state of breeding was at all proportioned to this sort of demand, we found no great difficulty in selecting horses for our Cavalry, though not one horse in 20 perhaps would answer our purpose. Now, when that demand is entirely gone, it is evident that unless we do something for ourselves, we shall soon be left without the means of mounting our Cavalry at all. The Government of Bengal trusted partly to some injudicious attempts in their own provisions, but chiefly to the chance of purchasing horses on the west of the Jumna. The first never answered, and the second failed so completely, that upon the end of the last war the Bengal Cavalry was almost dismounted. Since then the effects of an improved system have been felt, and the annual remount is nearly supplied by the Company's own breed. Before we change our system, we had better refer to Bengal for information. Private dealers cannot be expected to improve a breed by importing Arabian and European sires.

MOUNTSTUART ELPHINSTONE.

## ESTABLISHMENTS, COMMISSARIAT.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE,  
8TH MARCH 1825.

Although the expression in the Commissariat Regulations, which directs the Commissary General "to regulate the fixed and extra establishment of the different divisions," appears at first sight to justify the adoption of a measure like the present by the Commissary General on his own authority, yet a short consideration of the nature of that Officer's duties, shows that he ought to have confined himself to a representation to Government.

It is the duty of the Commissary General to ascertain the extent of the resources of each Division of the country, and to discover the most economical means by which the demands of the public service can be supplied in each; but it must rest with the Government to decide on the proportion of troops which ought to be kept in readiness for immediate movement, on which the extent of the field establishment to be kept up must depend.

From this it is evident that the Commissary General ought to make no reduction of his own authority, but ought in all cases to pursue the established course, of referring his proposed proceedings through the Military Board to Government.

The above remarks by no means imply that it is not the duty of the Commissary General to point out cases where establishments might be maintained at cheaper rates than those actually in existence, or where they might be entirely dispensed with from the ease and certainty with which they could at any time be replaced from the usual resources of the country; they only point out the necessity of a reference to Government where it might be influenced by political considerations to adopt a course not recommended by economy.

From these principles it follows that the Commissary General ought not to have addressed his letter of the 5th February to Major General Sir L. Smith, but to the Military Board. From the language of the Regulation above quoted however, as well as from



the manner in which he submitted his suggestions to the consideration of Sir L. Smith, the Governor in Council considers the Commissary General to be entirely exempt from all blame in this deviation from form, and is sensible that his proceeding originated solely in his anxiety to promote the important public interests committed to his charge.

In consequence of the peculiar state of the conquered territory in the Deccan arising from the unfavorable season and of the disturbances to which the present want of subsistence is likely to give rise, the field establishments should be restored to their former footing, and this resolution, with the reasons of it, should be communicated to the Commissary General. It is indeed to be regretted that Sir L. Smith should now feel himself called on to reduce them in consequence of the suggestions submitted to him.

It is almost unnecessary to observe, that the periodical tours of the Commissary General for the regulation of establishments forming part of the fixed Regulations of his department, are not in the least connected with any distrust of Major General Sir L. Smith, or any doubt of a continuance of his zealous attention to the reduction of all unnecessary expenses connected with his command.

Should this Minute be concurred in, it might be drafted into a letter to His Excellency the Commander in Chief.

MOUNTSTUART ELPHINSTONE.

## FIELD ESTABLISHMENTS, DECCAN.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

I kept this back, wishing to have the advantage of the observations of His Excellency the Commander in Chief, whose opinion I believe differs from my own on this subject.

In our former discussions regarding the Deccan Field Establishments, I believe it was always intended to get rid of the camels,

although the impossibility of selling them led to a resolution that they should be allowed to die away. The only question is, whether the present bad season is likely to last so long, or to be attended with such disturbance as to render it necessary to alter our former views. I should not myself think that it was, and as a considerable number of camels which the Commissioner purchased in a moment of urgency have now been made over to the Commissariat, I do not think any further addition to that establishment should be made.

## MOUNTSTUART ELPHINSTONE.

### REGULATIONS.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

There are two separate subjects for decision, as the Chief Secretary observes.

The first regards the subjects of foreign states who are serving as camp followers; and it was in respect to them that I recommended on the back of His Excellency the Commander in Chief's last letter, that we should follow the practice of Bengal. That practice, it seems, is to treat such followers in the same manner as if they were our subjects, and to make no separate Regulations regarding them. If there be no great objection to this way of proceeding, it has the advantage of being simple and conformable to our own usage, as well as to that of the Natives. If we attempt to be more regular, we shall fall into considerable difficulties. We profess to derive our power to punish the persons in question from the Native Princes. Ought not the Regulation to be made by them or in their name? or if we wish to act as their delegates in legislation, do not we require a more perfect delegation? At present the Sunnuds empower the Commander in Chief in some instances, and the Commanding Officer of the subsidiary force in others, to proceed against the subjects of the Native Prince according to our customs. I doubt if any of the Sunnuds give this

Government power to make regulations expressly for any portion of the subjects of those princes. I think the Commander in Chief, or the Officer in whose name the Sunnud is made out, would be much safer in acting under it on behalf of the Native Government, than if he attempted to derive an authority from any regulations of ours.

The second question relates to the necessity of *another* regulation for the trial of rebels and insurgents by Court Martial, and on the propriety of having a form of warrant ready in case of Martial Law being again proclaimed.

I am not convinced of the necessity of another regulation. The present one has been thought sufficient hitherto, and probably is so. It was first passed at Madras (VII. of 1808) by Sir George Barlow, who drew up the Bengal Code. It was adopted in Bengal in 1818 by Lord Hastings, who was familiar with Military law, and it was introduced here (probably not entirely without consideration) in Sir Evan Nepean's time, though it did not return from Bengal till after he was gone. It has been repeatedly laid before the authorities at home, (including Parliament, I believe,) and has never been objected to. I cannot therefore but think the doubts entertained of its legality must originate in some misapprehension. I even think (though not so decidedly) that the belief of its requiring additions is probably mistaken, but to those additions I consented. I only objected to the additional regulation being applied to the Deckan. In that country I maintain that we have the same right which the Paishwa had, of resorting to Military tribunals whenever we think it expedient, and that a regulation would weaken our powers instead of strengthening them.

With respect to the Warrant, my own opinion is, that Colonel Pierce's scruples were groundless, and that the Warrant he demanded (which led to all this discussion) was unnecessary. I found my opinion on the knowledge that the Madras Government, to which Colonel Pierce belonged, has never issued a warrant in all the many cases where it has proclaimed Martial Law, a letter from the Secretary being deemed authority enough. The same seems by the Chief Secretary's note to have always been the case here, and it probably always was in Bengal, as I find Lord

Wellesley acting on it, in one case at least. It is true that no precedent can set aside a statute, but I have not yet seen any statute that requires a Warrant. The Mutiny Act applies to other countries and to another description of men. I have nevertheless acquiesced in the propriety of Warrants, both on a former occasion and in my remarks on the Chief Secretary's note. I think the Regulation and the Warrant both unnecessary, but I agree to them in deference to our legal authorities. The *Regulation, as applied to the Deckan*, I think not only unnecessary, but injurious, and I therefore object to it as far as that country is concerned.

MOUNTSTUART ELPHINSTONE.

## PENSIONS.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

I am always unwilling to overrule the decisions of Boards entrusted with the details of the Service, and in this case I do not think it required. All the argument in the former resolution is against pensioning widows of men who, though nominally on Field service, are really not more exposed to danger than if they were at Bombay; but a camp is a much more dangerous place for the cholera than a cantonment, and it seems certain, that if these men had not gone on this service, they would not have died.

MOUNTSTUART ELPHINSTONE.

## PENSIONS.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

After the remarks of Mr. Goodwin and Mr. Sparrow, I have only to remark, that I should never propose the pensioning of families merely because they had died on service. If a Sepoy is killed, his family should be pensioned as a matter of course; if he dies in the ordinary course of nature, it ought not to be pensioned at all; but if he dies on service from any peculiar malady arising

from his employment, it should be a point for special decision whether his family should be pensioned or not.

MOUNTSTUART ELPHINSTONE.

## PENSIONS.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

The *Cholera Morbus* is a most violent, and it is to be hoped only a temporary, scourge. It prevails in particular places while the rest of the country is exempt from it; it rages with peculiar fury in camps and among persons exposed to night air, to wet, and to the other vicissitudes incident to Military service. A man ordered into a situation of so much increased danger, seems entitled to consideration; but the case of each detachment requires to be considered, and no general rule will apply.

I doubt if Mr. Warden is correctly informed, when he states that the sepoy gets a gratuity for entering the Service and another for leaving it. I believe the only case in which a sepoy gets a gratuity, is when he becomes unfit for the Service, and is obliged to leave it against his will. The whole proceeding will of course be laid before the Honorable the Court of Directors.

MOUNTSTUART ELPHINSTONE.

## PENDAL SYSTEM.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

The papers now forwarded show the expense of the Pendal system, calculated on more correct principles than in the former correspondence.

2. The Chief Engineer calculates the immediate outlay in providing pendals at the stations enumerated in his letter, for 15 Regiments only, at Rupees 5,62,000; but as it is most probable, that if the introduction of pendals be so far sanctioned, it will

ultimately be extended to other stations, it will be as well to calculate the expense for the whole Native Army.

3. The number of Native corps, not including locals, Pioneers, &c. may be stated as follows :—

3	Regiments of Native Cavalry.	
26	ditto	ditto Infantry.
1	Marine	ditto Battalion.
2	Extra	ditto ditto.
1	Golundauze	ditto ditto.
1	Guzerat Provincial	ditto.

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34 Total.

4. Of the above, pendals are already provided as follows, viz:—

2	Surat.
2	Bombay.
1	Baroda.
1	Bhewndy.

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6

Leaving 28 Regiments to be provided for.

5. The pendals already erected experimentally for one Regiment at Baroda cost Rupees 20,478; the estimates now before Government for accommodating another Regiment at the same station, is Rupees 44,000; with this exception, the Chief Engineer, in his estimate, calculates the average expense of pendals for all the Regiments at Rupees 37,000 each. On this calculation the expense of providing pendals for 28 Regiments would be Rupees 11,36,000

The interest on the above at 6 per cent.  
would be a permanent charge per annum of... .. 68,160

The annual expense of repairs for each  
Regiment is estimated at 800 Rupees, or for 28 .. 22,400

As the troops in pendals still continue to  
draw half hutting allowance, the expense for  
28 Regiments at Rs. 1,230 biennially, would  
be annually ... .. 17,220

Making an annual charge of Rupees 1,07,780  
in addition to the first outlay.

6. On this ground, independent of the opinions entertained by a great portion of Military men unfavourable to the pendal system, I would recommend that the former negative against their introduction generally be confirmed, and that each case, as brought forward, be considered on its own special grounds.

7. Local circumstances may have rendered them desirable at Bombay and Surat, and also at Bhewndy; but there can be little doubt that, in a plurality of cases, the hutting system is more suited and acceptable to the Native troops.

8. On the same grounds I would recommend that the estimate now before the Board for erecting pendals for the troops in Cutch and for another Battalion at Baroda be not sanctioned.

MOUNTSTUART ELPHINSTONE.

## PENDAL SYSTEM.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

I entirely agree with His Excellency the Commander in Chief, in thinking that the general use of pendals should not be introduced without the fullest consideration. There would be nothing in the proceedings of Government inconsistent with our acting on this opinion, if the last letter from the Secretary in the Military Department to the Private Secretary of His Excellency the Commander in Chief, dated 19th June 1866, had not gone a little beyond the Minute on which it was founded, by declaring that the Governor in Council would be prepared to sanction the gradual introduction of pendals, while the intention of the Board was, that it would be prepared to consider each case separately.

My own opinion is, that the system had better not be allowed to slide in gradually, but should be examined, with a view both to the expense and general expediency, and adopted or rejected on general grounds.

MOUNTSTUART ELPHINSTONE.

## MILITARY DISCIPLINE.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

The question cannot be satisfactorily put at rest without a reference to the Supreme Government, but as the conduct of Captains Livingstone and Fredrick does not depend on this decision, it should (at the same time that it is intimated that the above question is under consideration) be communicated, that the Governor in Council disapproves of the manner in which those Officers protested against the orders of the General Officer Commanding the Forces.

Had they doubted their liability, as Officers of the Garrison Staff to be put on Committees by the Officer Commanding the Forces, they should either have referred to the Commander in Chief of the Garrison in the first instance, or, if time did not admit, to have attended, and afterwards requested instructions for their future guidance. Having attended the Committee, they were not at liberty, on a question arising out of that duty, to refer to their situation as Officers of the Garrison Staff. It was their duty to obey the orders they received, and they were at liberty to have afterwards submitted a respectful statement of what they considered to be their rights. The Governor in Council however is persuaded, that the mode of protest which they adopted, did not proceed from any disrespect to the high authority under which they were acting, but to an erroneous impression of what was due to their Commissions.

MOUNTSTUART ELPHINSTONE.

## HORSE BREEDING.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

It has long been my intention to propose to the Board, that more effectual means should be adopted for encouraging the breed of horses in our own country, especially in the Deckan, and since my arrival here, I have been more than ever impressed with the importance of the measure.



The plan originally suggested by Mr. Warden, for distributing stallions throughout the country, still appears to me the best; but to perfect it, evidently requires more attention than the Collectors can give it; and it also requires that the person employed to superintend the breeding of horses, should likewise be empowered to purchase them, or send them to Committees for purchase; a good market being a better encouragement than any prizes, though those also, I am of opinion, should still be continued. The Superintendent should be in charge of the stallions, both in Kattywar and the Deckan, and might be authorized to place them wherever he thought the country favourable. The Collectors and other authorities being ordered to afford him every assistance.

The present opportunity is particularly favourable, as the Cavalry are complete in horses, and time will be afforded for breeding and for seeking out the proper persons to employ and encourage, before we are again pressed for an immediate supply, for although the breeds of the Deckan and Kattywar were at a recent period so excellent, they are now reduced so low, that I by no means feel confident in their immediately answering the demand; and I would suggest that the appointment in Persia should still be kept up for a few months, until we are enabled to pronounce on the probability of our succeeding in mounting the Cavalry here; a point on which the Superintendent should report as soon as possible.

The allowances should be the same as those now held by the Agent in Persia, and the appointment should be vacated on promotion to Lieutenant Colonel.

I know no fitter officer to propose for the duty than Captain Jameson, who was recommended to me for the employment by the late Commander in Chief; and if His Excellency the Commander in Chief can spare his services, I would suggest his immediately taking charge, and proceeding without delay to prepare rules for the conduct of his department, which should be submitted to the Military Board for consideration.

Before laying this Minute before the Board, I beg to be favoured with the opinion of His Excellency the Commander in Chief on a point of so much importance to the Army.

29th September 1826. MOUNTSTUART ELPHINSTONE.

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## HORSE BREEDING.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

The plan having succeeded perfectly at the other Presidencies which were not before breeding countries, I cannot see why it should not succeed in Cutch, Kattywar, and Maun Dais, which were always celebrated for the best horses in India. It has failed, because no one person had an interest in its success. Committees appointed by chance brought bad stallions, and Collectors, fully occupied with their own business, and not always skilful in breeding, were quite incapable of superintending the experiment. Had the plan been tried in Bengal on the same system, no doubt it would have failed there too.

With regard to the other objection, I have not failed to consult His Excellency the Commander in Chief (as ordered by the Court of Directors), whether an Officer can be spared, and His Excellency may again be consulted as to the relative importance of the employment for an officer (with his Regiment or superintending the breeding of horses). I must however observe, that if the plan promises to answer, the Agent of Persia will be withdrawn from thence, and the number of officers with their Regiments will not be diminished.

MOUNTSTUART ELPHINSTONE.

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## HORSE BREEDING.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

Having understood from Captain Jameson that one great cause of the ill success of the breeding system has been the bad-

ness of the stallions, a fact confirmed by all the Collectors, and to be anticipated from the manner in which committees are generally constituted, I would recommend that Captain Jameson be authorized to cast all stallions which are useless for breeding, and that hereafter none be sent to Committees unless recommended by him.

## MOUNTSTUART ELPHINSTONE.

### REDUCTIONS.

#### MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

The Minute of the Commander in Chief does not call for any new remark from me, except that I concur in His Excellency's proposal for retaining the two extra Battalions, and covering the expense by a reduction in the numerical strength of the other Regiments. The proposed arrangement, however, will effect no part of the saving, which Mr. Warden has estimated at 4,21,260 Rupees. It will, on the contrary, create additional expense if care is not taken to reduce men enough from the other Regiments to cover the pay of the Officers as well as that of the men.

I should also be happy to concur in Mr. Goodwin's proposal for sending the whole of the European Regiment to Cutch, if it could be done without expense. In every other respect I consider it as a most desirable arrangement; but as the principal employment of the troops in that country is to make rapid movements from time to time after banditti, I really do not think we can dispense with their being in that state of constant preparation, which renders field allowance necessary.

There are several subjects which His Excellency the Commander in Chief has not himself discussed, but on which he proposes a reference to the Military Board. That however appears to me to be attended with some difficulties. It must be recollected, that such a reference goes in the name of the whole Board, and implies the concurrence of the whole in the necessity for explanation. It must also be remembered, that in present circumstances such a reference implies censure. The Military Board has just gone

through a careful scrutiny of all the departments under them, and have made their report (in my opinion a judicious one) on the possible reductions. If we within a month send to them a plan differing from theirs, will it not appear that we are dissatisfied with their proceedings.

I have not their report to refer to, but I remember enough of it to illustrate what I have observed.

In the Gun Carriage Department, the Military Board proposed that the extra work should be done by the Commissariat. This they thought would lessen the expense of the Gun Carriage Manufactory by 150,000, while they reckoned that such extra work as would now be required, would only cost the Commissariat 100,000, thus leaving a clear saving of 50,000 Rs. I confess I have some doubts whether this will be anything but a transfer of a charge from one Department to another, but at all events I think the Military Board have given full credit for any saving that can be made, yet Mr. Warden's plan supposes a saving of 150,000 as under this head, and by referring the question to the Board, we should lead them to think that the whole Government concurred in the opinion.

The next point is the Ordnance, which seems to have been minutely examined by the Military Board, and in the different branches of Conductors and Store and Tent Lascars, they have already made such reductions as they thought practicable. I do not know whether those were more or less than the sum proposed by Mr. Warden, but it is probable they were not fixed without some inquiry, and it would not show much confidence in the Military Board, immediately to propose something different from what they had settled. I do not mean to say that it might not be highly proper for us to show such a want of confidence in particular cases, but before we do it, we should have some ground for thinking that the new plan is really better adapted to the wants of the Service than that which it is proposed to be set aside.

The other Ordnance savings proposed by Mr. Warden rest entirely on the supposition that our establishments should be smaller during peace than war (although our forts and stations

have more than doubled since the last war), which scarcely seems sufficient ground for questioning the correctness of the late proceedings of the Military Board. A mere glance at the establishments of the Ordnance Department, will show how little they have to do with actual war. As an average establishment we may take—

- 1 Laboratory man.
- 2 Carpenters.
- 1 Sawyer.
- 1 Armourer.
- 2 Smiths.
- 1 Bellow's boy.
- 1 Hammer man.
- 1 Sikligar.
- 1 Bheastee.
- 1 Sailmaker.
- 2 Workers in leather.

This is an establishment to keep a few arms, stores, and tents in repair, not to get up equipments for whole armies. They could only be dispensed with at some stations, if a plan recommended by Mr. Warden in another place were adopted, of having nothing but some muskets and some musket ammunition at the distant stations, depending on the Presidency, and perhaps one or two other Grand Arsenals for all other arms and stores.

This I do not think possible; but the number of stations might possibly be diminished, especially in Guzerat. If His Excellency the Commander in Chief should think this likely to be practicable, the opinion of the Military Board might be taken regarding it.

Nor have I any objection whatever to the Military Board being requested to explain the fluctuations in the expenditure of stores adverted to in paragraph 35. It is asked in the same paragraph, what the Ordnance Department can have to do during peace; but if any one will wade through one quarterly statement of the receipts and issues of the Grand Arsenal, he will soon perceive that there is no want of employment in that department.

The next item, not adverted to by His Excellency the Commander in Chief (perhaps as being connected with the Military Board), is the Establishment of Engineers. The first objection to the present plan is, that the expenditure of each district is too little to require an officer to superintend it. If the only duty of an Officer were to superintend the accounts of expenditure, the whole work might perhaps be done at one desk, but as he has to examine every building that is erecting or repairing, and often to report on plans where no building ensues, it is necessary to consider how the works under him are situated, as well as what they cost. There cannot be a more striking illustration of this than the Northern Districts. We have lately abolished one Engineer, and Mr. Warden thinks one more should be abolished in the same range, while a letter in yesterday's box shows, that it is only by an inconvenient removal of the Engineer of the Baroda Subsidiary Force to a central position out of the Gykavar's territories, that even the late reduction can be carried into effect.

The next objection is to the Superintending Engineers; this was proposed by the late Commander in Chief, and agreed to by the Board as tending to economy. We ought to be convinced that the plan has failed before we abolish it with the very same view with which we lately founded it. I do not suppose it will ever be maintained that a reduction of the establishments which control expenditure is necessarily a real saving.

The next department belonging to the Military Board is buildings, in which are included fortifications, churches, barracks, pendals, hospitals, and jails; under these heads we have expended for 5 years at the rate of 13 lacks of rupces a year, out of which it is proposed that we should in future save ten. Much we no doubt shall save, and the Military Board have pointed out all that we can do to promote the object, which is, to be slow in sanctioning public works; but for what purpose can we refer on this subject to the Military Board. The only particular buildings specified as objectionably expensive, are hospitals and Regimental schools; on the necessity of the greatest comfort in the first the opinion of the Military Board could not make us alter our own, and the schools

we have long since been obliged to give up among many other desirable arrangements which the pressure of the times renders inexpedient.

In comparing charges for fortifications and buildings at different Presidencies, the first point is, to be sure that both heads comprise the same items, which is most probably not the case. The next, is to see if the circumstances are the same. New jails are not wanted in old zillahs, nor new churches at old stations. From what we see at Mhow, the chance is, that the Government of Bengal, wherever it gained a new territory, built costly but permanent buildings, which rendered all future repairs unnecessary, while our very economy has protracted our expenditure to the ninth year since our acquisition of the country.

The next head is pensions, and there I see no reason to suspect the Military Board of remissness.

In the case dwelt on by Mr. Warden, I think they were quite right. Mr. Warden remarks, that the ryots are as valuable as the sepoy, and inquires why we should not pension their families when they die of cholera, to which the answer is contained in the rule on which the Military Board has acted. It is not sepoy who die of cholera whose families are pensioned, but sepoy who die of cholera in consequence of employment on service. Were ryots commanded to move into infected districts and expose themselves to the weather on public duty, their families ought also to be pensioned if they died.

I think however, that it would set the question of the merits or demerits of the Military Board at rest, if the Auditor General were requested to explain, as early as he might find practicable, the causes of the increase of the expense of pensions in late years. I think I can suggest two of them. Ten years ago we had only 18 Battalions. We have now of Cavalry and Infantry 29 Regiments, besides 2 extra Battalions and the Golanauze, in all nearly double our former force. This must nearly double our pensioners. In the ten years preceding the above periods, the Bombay Army lost upwards of 10,000 men by desertion at different times. This

might be either cause or effect of the paucity of pensions; but it certainly took many pensioners off our hands. We have now no more desertions than other Native armies.

I do not know what the practice is at the other Presidencies with respect to gratuities. When they recruit from a distance, I think they ought to give gratuities as we do. To go on to the heads of expense in paragraph 61, I believe the two plans recommended for saving in the transport of stores have always been acted on.

I have already given my sentiments on the exchange paid to the troops.

The carriage of the sick was some time since revised and greatly reduced, I should think, as much as was practicable.

If paragraph 66 is meant to recommend an abolition of the Commissariat, I would not recommend its being made a question with the Military Board. The objections to such a measure seem to me insuperable.

The grounds on which the bazaars on the Bombay establishment were established on their present footing, were explained both by the Government and by the different members of the Military Board at unusual length, to those papers I must beg to refer.

I am very sorry that I have been obliged to dissent from so many of Mr. Warden's propositions on a subject on which I believe we are both equally interested. If the Minute under discussion had been confined to plans of future reduction, this might not perhaps have been the case; but as it is professedly written to show the grounds on which Mr. Warden differed on former occasions from the other members of the Government, the answer could scarcely be otherwise than to a certain degree controversial.

MOUNTSTUART ELPHINSTONE.

21st July 1827.

7 MIL



## REDUCTIONS.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

Mr. Warden's Minute of the 3rd has just reached me, and I beg to offer some remarks on parts of it, reserving what I have to say on the Military Department, until I hear the sentiments of His Excellency the Commander in Chief.

The numbers of Sebundees have been very minutely examined in each district, chiefly since May 1826, and after many reductions, an additional retrenchment of their numbers has been made by the Committee, the local corps have undergone a like revision; so that it is probable they are already brought far below the level desired by Mr. Warden. If they could be further diminished, it should still be done by a minute examination. The classes united to form the aggregate of 15,309, comprehend all descriptions of persons, from fully disciplined Battalions to the worst description of Peons, whose pay is sometimes rather given to prevent their robbing themselves, than from their utility in checking other robbers. Some also, as Mr. Warden observes, are mere Revenue Peons. No conclusion that is come to regarding a part of such a mass can be applicable to the whole.

The resolution of Government, at the recommendation of the Reduction Committee, that regular troops should be employed on no civil duties whatever, except Jail guards and Treasury guards, with the additional inquiries about Jail guards, suggested I believe by Mr. Warden, seem to have sufficiently circumscribed the employment of troops of the line. The advantage of this restriction of their services is so obvious, that I have no recollection of its ever having been called in question.

The management of the Surveys does not appear to me so injudicious. Of General Reynolds' I know nothing, but that it ceased about 20 years ago. The Deccan Survey is on the model of Colonel Lambton's, which has not been reckoned injudicious. Had the establishment been kept up, that Survey would have closed this

year or the next. The Guzerat Survey, though it has cost too much, is not devoid of practical utility, and affords much interesting information. These are the only remaining Surveys, and both have been reduced to a very moderate annual charge.

On the details of the Military expenditure I shall, for the reason before stated, make only a few observations, but I must first remark, that a great number of the proposed reductions have already been completed, that others of the number have been discussed, and that the expediency of most of the remainder seems doubtful.

If the proportion borne by our Military expenditure to our resources, in comparison with that at the other Presidencies, was the criterion by which we ought to regulate that expenditure, we should have no deficit, but the principle cannot be acted on. Mhow, for example, yields nothing and has 4 Regiments. Broach yields 20 lacs and has 5 companies, yet the force at Mhow is the most necessary of the two.

The supposition that our peace establishment should be less than our war, does not seem to me more defensible. It is founded on the practice of Europe; but in Europe we have neither foreign conquests to keep, nor sudden emergencies to provide for. At a peace in Europe more than half the Army is discharged, and more than half of all establishments broken up. In no part of India have we ever had a peace which was not followed by an augmentation of the Army, with no diminution (if with no increase) of the establishments, and this must be the case as long as every war adds greatly to our territories. The ordnance which was sufficient for 8 stations cannot be sufficient for 18; the pioneers which might have caused a saving had they been employed on fortification at Bombay, Tanna, or Surat, may cause an expenditure when required to make roads to Poona and to Mhow; the Engineers which do the duty of an old and settled territory, cannot do that of a new one, where every species of building, Civil and Military, is still to be constructed, nor can the expenditure on buildings in two such countries bear any comparison.

Some of these expenses however must diminish as time advances, and we should take care that the reduction of them is not overlooked.

The assumed saving of 10,00,000 Rs. for buildings is nevertheless far beyond my expectations. The whole amount estimated for every description of buildings by the Accountant General is 12,37,000 Rs., supposing the Military dead stock to be all buildings; but as this is probably very far from being the case, the whole estimated charge for buildings probably does not exceed the proposed saving.

I consider the uniformity of the coin established for the pay of the sepoys as one of the greatest improvements that has been made of late years in the Army, and should be very sorry to see it done away.

I should much prefer 3 Regiments for the force in Cutch; it was the necessity of the times alone that led me to recommend reducing it to 2 Regiments.

The reduction of the Batta to the sepoys, while continued to the European Officers, is a measure in which I should be sorry to concur.

As it would appear from Mr. Warden's Minute that he had opposed every expenditure that has been adopted by the Government, and that he had stood alone in his opinion, it is necessary that something should be said on the other side. The great items of charge which had at one time increased our expenditure by more than seventy lacs of Rupees, were enumerated in two papers annexed to my Minute of February 11th, the heads among those charges which were disapproved by Mr. Warden are few and unimportant. It has certainly been my misfortune often to differ from Mr. Warden on questions of expenditure. In those cases I have only to hope that it may be determined, by reference to each case, whether the saving was such as could have been acceded to, and whether if it had, the gain in a vast majority of instances would have made up for the trouble and derangement of the departments affected.

I shall only offer one more observation. Mr. Warden states, that if twenty or even one lac of Rupees can be retrenched from the annual expenditure, it says but little for the control exercised by those under the Government. The articles retrenched are all of conspicuous magnitude, and it will cost the Court of Directors little trouble to see if any of them is of such a nature as to admit of a suspicion that it was incurred through negligence.

MOUNTSTUART ELPHINSTONE.

*7th July 1827.*

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## REDUCTIONS.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

The Military Board appear to have given the question proposed to them a careful consideration, and I am much inclined to believe in the correctness of their opinions.

But their statement, instead of increasing our savings, will probably diminish those already calculated on. In most of their proposed reductions they have been anticipated by His Excellency the Commander in Chief, and the result of their opinions in those instances rather leads to a doubt whether we have not taken credit for greater diminution of expense than is practicable. From the different forms in which they are drawn up, I have not been able to compare the Commissariat reductions proposed by His Excellency the Commander in Chief with those in the accompanying paper; but the total amount of the latter exceeds that of the other by a lac of Rupees, even if no allowance is made for occasional hired cattle, and by two lacs if that allowance be made. It is possible that His Excellency the Commander in Chief, on looking over the column of charges which the Military Board consider indispensable, may be inclined to restore some of those which he has recommended to be abolished, at all events it seems necessary to make the proposed allowance of a lac of rupees for occasional Commissariat charges if the permanent ones are so much reduced.

The whole net saving in the Ordnance Department, including the Gun Carriage Manufactory, after deducting the saving in Lascars, already proposed by His Excellency the Commander in Chief, amounts to about one lac of rupees, and I am afraid the calculation that the work will be done so much cheaper in the Commissariat, does not stand upon very sure grounds.

If therefore the present report tends to no diminution of the reduction already calculated on, it will lead to no increase, and the reduction in the Military Department remains at 18 lacs.

On the other hand, I think if the Accountant General has taken no credit for a saving in Military buildings in future years, he might calculate on 1,50,000 rupees (as stated by the Board); at least the expense of buildings in new possessions ought to diminish after a certain time, and numerous improvements, which were highly expedient in ordinary times, ought to be suspended in time of remarkable pressure.

MOUNTSTUART ELPHINSTONE.

8th July 1827.

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## CATTLE BREEDING.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

The report of the Military Board, though very meagre, is correct, and ought I think to be communicated as such to the Honorable the Court of Directors. The difference between the opinion of the Board and that of Sir L. Smith, is only in appearance. Sir Lionel appears to have considered the question as put with a view to the introduction of horses, and answers by expressing his good opinion of bullocks. The subsidiary force at Poona also was so long on the field establishment, that the cattle had all the advantage of the permanent system. They were besides foreign cattle. If we wish for any secure system of our own, we must breed like the other Presidencies. I do not propose a plan in detail, because the letters of the Supreme Government have told

us with great truth, that in the present state of our finances no prospect of future advantage can make up for present expense. I could wish, however, that some opinions were obtained on the possibility of improving the general breed of the country by the introduction of foreign bulls. This is a very important object in an agricultural view no less than in a Military.

MOUNTSTUART ELPHINSTONE.

## CATTLE BREEDING.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

I am happy to see our attention called to this subject. There is, as is well known, a beautiful breed of cattle in Guzerat, and if it answers well for work, and can be procured in sufficient numbers, nothing is wanting in that province. On these two questions however I have doubts.

In the Deckan the breed of cattle is useless for Military purposes, so much so, that the Madras Cattle Contractors who came up with the Duke of Wellington, were retained at a great expense as long as there was service in that part of the country, and are still retained I believe on a more contracted scale.

It is always an article in their contract, that a certain proportion of their cattle are to be from Mysore, and it was the advantage of producing this description of cattle that recommended them for employment. This plan answered very well as long as it was kept up, though I believe it is the only instance on which depending on hired \* cattle for draft ever did answer. But when affairs in the Deckan assumed a settled appearance, it was not thought necessary to keep up those establishments to their full extent, and with a view to rendering us independent of the Mysore contractors, as well as to extending our means of supply, and also to improving the agricultural cattle of the country, I suggested

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\* I ought to have said *occasionally* hired cattle, for those of the Hyderabad Subsidiary Force were hired, but *permanently*.

the distribution of a number of bulls of the Mysore breed throughout the Deckan. Many bulls were accordingly procured from the Company's breeding establishment at Mysore, but the plan being entrusted to the Collectors, who were already burdened with their other duties, failed entirely. The cattle in the Deckan are now in a worse state than ever, owing to the mortality in 1824, and if we had occasion to equip our Army in that country, I have great doubts how we should succeed. I would recommend, therefore, that the attention of the Military Board should be called to the means of improving the breed (in case they think any improvement necessary), and that they should be requested to state whether it might not be practicable, by distributing bulls over the country under proper superintendence, to provide a breed for Military purposes as well as for agricultural, without the expense of great establishments to rear cattle for Military purposes alone.

MOUNTSTUART ELPHINSTONE.

## IMPRESSMENT OF CARRIAGE.

MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

As the order had been published, I was desirous if possible to avoid recalling it; but as it must now be recalled to admit of a regular discussion on the subject, I consider everything to stand where it did before the publication.

I have read the letters I then called for, and the effect has been, to strengthen my opinion of the impolicy of any interference on the part of Government or its officers. The great objections to the sort of interference which has been adopted at Madras, of forbidding force, but enjoining persuasion on the part of the Civil establishment, are—*1st*, that such a system will infallibly degenerate into the old plan of pure force; *2nd*, that by holding out some hopes of assistance in the course of a journey, it prevents that exertion on the part of the traveller to complete his means of transport or to retrench his baggage, which he would certainly have recourse to if he knew that he had no other means to trust to.

The first of these consequences arises partly from the circumstance pointed out in the proceedings of the Bengal Committee, that the Native Civil Officers have an interest in keeping up the system of forced labour, by which they benefit more than any other description of people, and partly from the fact that those functionaries are easily intimidated, and if a traveller has an order to show for their assistance in procuring carriage for him, they will be very apt to be guided in respect to the means by his notions of propriety, being much more afraid of the consequence of his displeasure, than of any clamour that may be raised among the Ryots. The instance mentioned by Mr. Warden, also shows that even European Officers will misunderstand the intentions of Government, and will think the order for assistance is the essential part, and the prohibition of force more for appearance than reality.

The 2nd objection was partly removed by the modification last suggested by His Excellency the Commander in Chief, and it was this that led me to acquiesce in the order after it had been published. His Excellency makes it a condition, before aid can be claimed, that the traveller should be provided with a certificate that he left the station from which he set out with his carriage complete. If this rule were strictly enforced, it would strike at the root of the evil, for no man who was already provided with carriage, would think of pressing coolies; but it would require a strict system of muster to enable the Commanding Officer to certify that an officer had carriage for all the baggage which he chose to carry in addition to his camp equipage, and the proceedings of the Bengal Committee have also suggested to me, that the same sort of certificate should be required for every traveller's servants, since it appears to be their baggage more than their master's that lead to these calls on the villagers.

I think, therefore, that the order should not be published, and that the present Regulation should be allowed to operate, as it probably will do in time, both to diminish the demands of travellers and increase the means of voluntary supply.

MOUNTSTUART ELPHINSTONE.

12th September 1827.

8 MIL.



## TELEGRAPH.

### MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

The cost of printing 300 copies of the Dictionary would be 2,000 Rupees, and that of making up the great number of Telegraphs recommended would not I conceive increase the expense to more than 3,000, or at most 4,000 Rupees in all.

I should not therefore in ordinary circumstance have the least hesitation in recommending the immediate adoption of Colonel Goodfellow's suggestion, and further, of recommending that the use of the telegraphs should be introduced experimentally in the most extensive manner in Cutch.

It is in war chiefly (though not entirely) that the benefit of these contrivances would be felt; but whatever is to be used in war must be prepared in peace.

As Captain Jacob's services cannot be spared from his station, and as every expense, however trifling, ought to be forborne at present, if not indispensable, I will not recommend that any measure be adopted in consequence of this report, but that a letter be written to Captain Jacob (or in whatever may be the regular channel), expressing the sense entertained by the Governor in Council of the zeal for the public service that led him to undertake his compilation, and of the ability with which he had executed it, and acquainting him that, although the present time is not favourable for the adoption of the plans he has so meritoriously organized, yet the consideration of them will not fail, at a future period, to engage the attention of the Governor in Council.

MOUNTSTUART ELPHINSTONE.

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## TELEGRAPH.

### MINUTE BY THE HONORABLE MOUNTSTUART ELPHINSTONE.

It would be presumption in me to offer an opinion on such a subject in opposition to that of the Commander in Chief. I there-

fore make over to Colonel Pasley the task of explaining his plan (as is done in the accompanying book), and I shall only mention two situations, perhaps peculiar to this country, where a telegraph might be more useful than it would be elsewhere. The first is the siege of a hill fort, where the besiegers are in possession of a point visible to two detachments, the road distance between which is from 25 to 35 miles. Another is where numerous detachments are watching predatory hordes, as in Cutch, and where everything depends on rapid communication of intelligence of the way they have taken and places they have been seen at, the direction they are moving at, &c. I merely mention this to explain my first Minute. It is not proposed that any immediate steps should be taken for the adoption of the proposed telegraph.

MONTESTUART ELPHINSTONE.



**SELECTIONS FROM THE RECORDS OF THE BOMBAY  
GOVERNMENT.**

No. CV.—NEW SERIES.

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**P A P E R S**

RELATING TO THE

**REVENUE SURVEY & ASSESSMENT**

OF THE

**MORA TALOOKA,**

IN THE

**HYDRABAD COLLECTORATE.**

IN SIND.

**B o m b a y :**

PRINTED FOR GOVERNMENT  
AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.

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1867.

*Price Rs. 1-8-0.*



No. 246 of 1867.

From the COMMISSIONER IN SIND,

To His Excellency the Honourable Sir H. P. E. FRERE,

*G.C.S.I. & K.C.B.,*

Governor and President in Council, Bombay.

*Commissioner's Office, Camp Anundro, 31st January 1867.*

HONOURABLE SIR,—I beg to submit for your Excellency's approval the Settlement made by Major Taverner of the Mora Talooka in the Hyderabad Collectorate, with the remarks of Major Phillips and Major Francis.

2. The Talooka of Mora is situated to the north of Sukkurund and south of Nowshera. Its area is 703·86 square miles, of which one-fifteenth is under cultivation. The remaining portion consists of sterile sandy soil, and culturable soil of too high a level to be irrigated by the canals in existence.

3. The maximum rates proposed are as follows :—

	Churkee.		Moke.		Daka.		Sailab.	
	Rs.	a.	Rs.	a.	Rs.	a.	Rs.	a.
1st Class Dehs....	1	6	2	8	4	0	3	8
2nd do. ....	1	4	2	4	3	8	3	0
3rd do. ....	1	2	2	0				
4th do. ....	1	0	2	0				
5th do. ....	0	14	1	12				

NOTE.—The Daka and Sailab cultivation are all comprised in 1st and 2nd class villages.

4. The above rates are considered suitable by Majors Phillips and Francis, and have my approval.

I MT

5. The financial result of the settlement will be a survey assessed revenue of Rs. 73,979 against a past average revenue of Rs. 64,022, and of 58,624, the realised revenue of the year 1865-66, the same being an increase of 12 and 25 per cent. respectively. There is also a further sum of Rs. 4,905 on lands lying fallow which may or may not be taken up, whilst the waste unassessed culturable lands extend over an area of 148,997 acres, the greater part of which, however, is beyond the reach of irrigation.

6. There are only three questions in Major Taverner's report that require any comment from me. His treatment of the Baranee lands, of Wace lands, and the number of revenue instalments he recommends. Major Francis proposed on a former occasion, that they should be rented to the village community at a small annual assessment, but Major Taverner is of opinion that the fall of rain is so small and uncertain in Sind, and the cultivation so fluctuating in amount, that it is much better to have a crop assessment. If Major Francis' proposals were carried out, the people would consider it a grievance to have to pay on land they were unable to cultivate for want of rain, and Government would lose considerably in a good Baranee season. In Baranee lands situated at the foot of hills and receiving their supply of water from mountain torrents the cultivation is more certain, and Major Francis' plan might be carried out, but in the plains the case is different, and I am inclined to concur in Major Taverner's views, in which the Collector of Hyderabad agrees likewise.

7. It is unfortunate that Major Taverner did not ascertain the state of the canal on which he mentions the cultivation had declined. Had he done so he would have found that the decrease was entirely owing to an insufficiency of water, and had nothing to do with Baranee cultivation, which produces a very inferior crop in comparison with Churkee cultivation with a proper supply of water.

8. The Sindhee cultivators are as sensible and prudent as the same classes in other parts of India, and never put themselves to the expense and trouble of migrating to other localities as long as

the supply of water in the canals on which their lands are situated is sufficient. Should it not be sufficient they will do so, but will return immediately their own canals have been put into working order.

9. Waee lands are supposed to be on a stratum which affords a supply of water within a few feet of the surface ; a wae or pit is dug at a cost of 20 to 15 rupees, and a Rubbee crop is grown in addition to the Khurreef. Major Taverner has assessed these at 2 annas higher than common Khurreef lands. This Major Francis thinks too low ; but as the cultivators of this district are badly off for canals, and consequently very poor, I would not add anything to Major Taverner's rates.

10. As for the instalments they are the same in number as are in force throughout Sind, and I think should not be altered. The Sindee cultivator is still very poor, and has a long way to make up before he arrives at the prosperity enjoyed by the ryots of the other parts of the Bombay Presidency, and it is of great importance that he should not be called on to pay his revenue before his crops are ready for the market.

11. In anticipation of the orders of your Excellency in Council, I have desired Major Taverner to introduce his settlement.

12. I would suggest that the entire correspondence be printed as a Government selection, and fifteen copies forwarded for distribution.

I have the honour to be, &c.

S. MANSFIELD,  
Commissioner in Sind.



No. 222 of 1866.

From Major E. L. TAVERNER,

Settlement Officer Left Bank Districts,

To Major F. PHILLIPS,

Collector of Hyderabad.

*Dated 19th October 1866.*

SIR,—I have the honour to forward my Assessment Report, with accompanying map, of Talooka Mora, and to propose the introduction of the settlement assessment for a period of ten years, commencing from the Khurreef of 1867-68.

2. Mora Talooka is bounded on the north by Talooka Nowshera and by a portion of His Highness Meer Ali Morad's territory, on the east and south by Talooka Sukkurwud, and on the west by the river Indus. Its mean length is about 45 miles, with a mean width of 16 miles, and its area, according to the Revenue Surveyor's computation, consists of 703·86 square miles.

3. The chief towns are Mora and Dowlutpoor; Guchero, Sehra, Suddoja, and Shahpoor are also fair-sized villages. In the town of Mora a large quantity of native soap is manufactured, but the population generally, as elsewhere in Sind, confine themselves to agriculture. The main postal road to Rohree runs through the Sunsaoree Tuppa, but the chief road of the talooka is from Dowlutpoor through Mora to Nowshera, with a branch from Mora to Sehra.

4. The canals consist of the Dyanwa, the Dumba, the Meerwa, and the Dadwa. These are cleared by Government at an average annual cost of Rs. 9,607. There are no zemindaree canals of any size in the district.

5. The talooka is divided into eight tuppas, viz. Sehra, Munalwin, Paorun, Wud Pagza, Mora, Guchero, Dowlutpoor, and

before.

which jagheers have been measured into survey Nos. and classified against the time when they will fall into Government.

8. *The talooka of Mora*, although adjacent to Talooka Nowshera, did not form part of the district known as Sahittee, which continued to form a portion of the territory of His Highness Meer Ali Morad until 1852, but at once became British territory after the battle of Mean. Taking the division of Sind into Upper and Lower by the Lukee hills, at about the line of Schwan (which is nearly opposite Dowlutpoor), Talooka Mora forms the most southern of the Upper Sind districts, and in its southern portion the dry and comparatively barren country commences which stretches through Talooka Sukkur and, leaving a fertile strip of only a few miles in width on the banks of the Indus. From Mora to Pubjo, a distance of thirteen or fourteen miles, there is hardly a trace of cultivation to be met with: the soil is either sand or salt. About Pubjo and Sunn the land is ~~settled~~ <sup>so that it is seldom cultivated</sup> oftener than once in every three or four years, ~~as the water~~ <sup>the water</sup> supply furnished from the tails of the Nowlukkee and Dadwa is uncertain. The fertile portion of the talooka is very fairly defined by the road from Dowlutpoor to Mora and Nowshera. Westward of this the soil is good and full of moisture, and there is a large proportion of sailab cultivation. Eastward of the road the soil is dry and high-lying. The second line of tuppas (those lying between the river-side tuppas and the dry inland tuppas) that are found throughout the talookas of Kundiara and Nowshera, and that contain the best of all khurreef lands, are almost wanting in this talooka, especially in its southern portions. Mora Talooka contains a larger proportion of sailab lands than either of the talookas already settled; indeed, with the exception of Sunsaoree, its tuppas are all more or less sailab, and its revenue is consequently more fluctuating, as may be seen in the great falling off that has taken place in 1865-66, compared with the three preceding years. The moke lands are not very extensive, and are mostly confined to a few villages, but where they do exist they are very good, and admit of a larger percentage of their surface being sown with rice than lands of a corresponding description in Talooka Nowshera. The daka cultivation is good, and

is chiefly carried on on the banks of the inland dhunds and wahoors, shown on the map, in tuppas Mora, Guchero, and Dowlutpoor. The talooka has hitherto been more lightly assessed than Talooka Nowshera, and the assessment fixed upon its several dehs bears somewhat unequally on different portions of the talooka. For example in Deh Kureja, Tuppa Schra, by looking at statement No. III. of the existing rate per jureeb, it will be seen that it pays Rs. 1-12-0 for sailab and Rs. 2-2-0 for daka cultivation, whilst dehs Koorace and Khokur in Tuppa Mora, which are equally well situated with equally good daka, and only somewhat inferior sailab, pay but Rs. 0-14-0 and Rs. 1-4-0 respectively, or little more than half the above. Tuppa Guchero is on the whole more highly assessed than the adjoining one of Dowlutpoor, Mora, and Pooran. This probably arose from the classification of certain portions of the talooka being more developed than others at the time of fixing the rates, and I bring the fact to your notice to account for the increase and decrease in the revenue of villages consequent on the application of one general maximum rate for the villages of each class for the entire talooka. I trust that a consideration of the rates per acre, of the number of fallows required, of the amount of the culturable waste, of the nature of the cultivation of each village and of its position as shown in the maps, taken together with its past rates, will serve to show that the assessment has been carefully considered for each deh. With the classification of one deh, Koonda Nundo, I am not satisfied, and I have ordered my classing assistant to revise it before the introduction of the assessment; but it is only right to mention that this is chiefly owing to the pertinacity with which the zemindar of the deh refused, both at the time of measurement and classification, either to measure or point out the boundaries of his land, and as his haris were equally sullen, land that should have been brought under assessment has been left in the un-assessed waste. Under the provisions of the Summary Act this case can now be remedied.

9. Taking all the circumstances mentioned in the foregoing paragraphs into consideration, I have fixed the following maximum rates for the different descriptions of cultivation in the talooka:—

	Churkee.		Moke.		Daka.		Sailab.	
	Rs.	a.	Rs.	a.	Rs.	a.	Rs.	a.
1st Class Dehs ..	1	6	2	8	4	0	3	8
2nd do. ..	1	4	2	4	3	8	3	0
3rd do. ..	1	2	2	0	NOTE.—The Daka and Sailab cultivation is all comprised in 1st and 2nd class villages.			
4th do. ..	1	0	2	0				
5th do. ..	0	14	1	12				

10. The churkee maximum rate is two annas lower than that of Talooka Nowshera, the moke rate four annas or a class higher. The daka rate is the same as that of Nowshera, the sailab eight annas or one class lower. The chief increase falls upon the best khurreef and moke lands, as there is a species of cultivation carried on in these lands known as the cultivation under “*wacees*” which makes them more profitable than ordinary khurreef lands. These *wacees* are pits, lasting for about two years, that are dug in the field at a cost of from fifteen to twenty rupees, and by these means rubbee crops are grown in rotation with the khurreef. I have treated these lands on the same principle as that by which the “*dusota*” rate was fixed on the best rice lands of the Concan, and the order for their classification is laid down in paragraph 11, Chapter XV. of the Code of Rules for the department, and is as follows:—

11. “The khurreef ‘wheel’ and ‘moke’ lands described in Chapter V. Section 6, in which rubbee crops can be raised as rotation crops by means of ‘*wacees*’ or pits dug for water in the field, are to have an enhancement of one or two annas, as the case may require, given to their water classification. This enhancement is not to be given merely to those fields in which ‘*wacees*’ actually exist at the time of classification, but whenever a classifier finds that cultivation by means of ‘*wacees*’ is carried on in the village he is sent to classify he will at once report the fact to the officer of the establishment. The officer will then personally inspect the land, and define, according to his judgment, by a pencil line on the field copy of the village map the extent of land for which the

enhancement in the classification is to be given for the capacity of sinking "waees" in its surface ; and he will further determine the numbers that require to have their water classification enhanced on this account by two annas, and those for which one anna will be sufficient. Well lands, "chahee," and gardens contained within the circuit of the ground thus defined by the officer are to have their water classification enhanced in like manner. In the register the remark for this description of cultivation is to be entered in the column of the water supply as from a canal (name) and "wacee." This order does not apply to sailab lands.

12. About Rs. 8,000 worth of revenue is derived from khurreef lands thus classed under "waees." This should be borne in mind when looking at the contrasting statement No. II., in which statement the revenue derivable from these lands (in the past years in which they produced rubbee crops) has been entered under the chadings of "daka" or "chahee" (well lands).

~~Some of the above description~~ of the above description have now been entered in the survey registers as "churkee" or "moke waces," and have been separately shown in the settlement khatas ; and I have to propose that the revenue of these lands be collected in six equal instalments—three in the khurreef and three in the rubbee. The cultivator has generally some of his wace lands under khurreef and some under rubbee cultivation each year ; thus this arrangement would have the effect of meeting more nearly his requirements for paying the assessment than if the whole revenue were collected in the khurreef season.

14. In the village of Korace there is a reay or river kutchra, survey No. 109, consisting of 748 acres more or less cultivated, and entered as belonging to the community, or raj of Korace generally. This I propose to offer at a lump assessment of Rs. 600, upon condition that the occupants become severally and jointly responsible for the payment of the entire assessment so fixed, and that claim for proportional remission will only be attended to should one-tenth or more of the land of the survey No. be washed away ; whilst on the other hand fresh deposit exceeding one-tenth of the present survey No. will become liable for a proportional

increase of assessment. This is in accordance with His Excellency Sir Bartle Frere's rules on alluvion and diluvion, paragraph 6, dated 22nd May 1852. Should the offer be rejected, the present system of cross measurement will have to be continued in this survey No.

15. In like manner in an island in the river in the jagheer deh of Salyehpoor there is a mukkan called Bumba Dera, of which a portion, survey No. 1, of 509 acres, is ryottee, and has been entered on the register in the name of Syud Noor Mahomed Shah. In the deh of Khyro Dera there are five reay kutcha survey Nos., from Nos. 105 to 110, containing 243 acres entered as Government Nos. In the deh of Guchero there is one survey, No. 59, of 144 acres, entered in the name of Alla Oobbaee and Futteh Mahomed Bhogia and other Lugharee. In Deh Koonda Nunda there are two survey Nos., 59 and 60, of 109 acres, entered in the name of Jheeno Pulee and others. In Deh Dowlutpoor there is a large reay kutcha survey No. 174, of 1,537 acres, entered in the name of the tribe of the Hotee Potras. In all this reay kutcha land the cultivation is so desultory and uncertain that it will have to be left for annual cross measurement, as at present.

16. The amount of revenue realisations from baranee cultivation in the talooka during the last seven years amounts to but Rupees 3,912, and this is chiefly in the Sunsaoree Tuppa; of this amount the sum of Rupees 2,838 was realised in one year, 1863-64, the balance in the remaining years. No workable average for a fixed assessment can be obtained from such a very fluctuating and chance source of revenue as the foregoing shows the baranee to be, even in years in which rain falls. There is, moreover, the significant fact that in this year, 1863-64, the regular wheel cultivation of the Sunsaoree Tuppa descended from Rupees 10,094 to Rupees 6,815, to rise to Rupees 9,315 again next year. This I think argues against giving out the whole baranee cultivation of a village at an average fixed sum, as the Revenue Survey Commissioner had hoped could have been effected. The fall of rain in Sind is so uncertain and unequal from year to year, and the extent of the consequent baranee

cultivation so fluctuating, that I am disposed to think that a crop measurement in the years when rain does fall is the only method that can be carried out to meet the requirements of the case.

17. The only deductions that require to be made from the survey assessment on account of the hucaba of lands irrigated from zemindaree canals consist of Rupees 55, viz. Rupees 36 in Deh Kareja, Rupees 2 in Deh Kullora, Rupees 3 in Deh Kot Sutabo, and Rupees 14 in Deh Sulba. I here wish to notice that in your forwarding letter No. 2171, dated 27th September 1866, on my assessment report for a portion of the Nowshera Talooka (with a copy of which you kindly furnished me), you expressed a wish that the portions of the survey assessment that represent the land rent and water assessment respectively should be separately shown in my assessment reports. This, however, I am unable to work out until the entire lands under each canal, extending sometimes over two or three talookas, have been measured and settled. When this has been effected, the exact sum representing the water rate and assessment of each deh will be entered on the village register. Meanwhile a temporary rate of two annas per rupee of assessment is to be levied under the Revenue Survey Commissioner's letter No. 178, dated 8th August 1865. I have some time since forwarded a plan for showing separately the land and water assessment of the Rohree Talooka to Major Francis for approval, and this plan is, I believe, at present with the Collector of Shikarpoor. On Major Francis' reply I shall be enabled to show the land and water assessment for Talooka Kundlara in the manner above-mentioned.

18. I have attentively reperused the form of Proclamation composed by the Revenue Survey Commissioner, the Collector of Shikarpoor, and myself jointly for Talooka Rohree, and propose the same form for Talooka Mora. A copy is herewith appended.

19. A census and diagram of the talooka, statements Nos. VI. and IV., are appended.

20. *Lastly*, the financial result of the settlement will be a survey assessed revenue of Rs. 73,979, against a past average



revenue of Rs. 64,022, and of Rs. 58,624 the realised revenue of the year 1865-66, the same being an increase of 12 and 26 per cent. respectively. There is also a further sum of Rs. 4,905 on lands, long fallow, which may or may not be taken up, whilst the waste unassessed culturable lands extend over the large area of 148,997 acres. Much of this land is, however, comprised in the tuppa of Sunsaoree, and is beyond the reach of irrigation from existing canals.

I have the honour to be, &c.,

E. L. TAVERNER, Major,  
Settlement Officer, Left Bank Districts.

*Settlement Office, Hyderabad, 19th October 1866.*

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# STATEMENTS.

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# STATEMENT

*STATEMENT showing the actual extent of Cultivation and Revenue, for a period of the percentage Increase and Decrease by the proposed Survey Rates*

No of the Deh or Village.	General nature of Cultivation.	Class of Deh or Village	Name of the Deh	Actual extent of Cultivation and											
				1859-60		1860-61		1861-62		1862-63.		1863-64.		1864-65.	
				Acres.	Rupees.	Acres.	Rupees.	Acres.	Rupees.	Acres.	Rupees.	Acres.	Rupees.	Acres.	Rupees.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	1	Kurda .....	907	2,994	1,016	3,047	1,050	2,948	1,177	2,970	1,134	2,072	1,052	Tuppa 2,744
2	2	1	Schra .....	1,344	3,394	1,535	3,848	1,656	4,167	2,010	4,303	2,153	4,461	1,661	3,732
3	..	..	Furreed Dera ..	..	..	..	..	..	..	..	..	..	..	..	1st Class
4	..	..	Ghungun ....	..	..	..	..	..	..	..	..	..	..	..	1st Class
5	..	..	Daparia .....	..	..	..	..	..	..	..	..	..	..	..	1st Class
			Total....	2,341	6,388	2,553	6,895	2,715	7,115	3,187	7,363	3,287	6,536	2,733	6,476
6	1	1	Sodhooja .....	1,086	3,227	1,208	3,306	1,255	3,936	1,311	3,465	1,412	3,396	1,387	Tuppa 3,476
7	2	2	Dooro .....	146	450	137	474	195	628	296	656	359	940	241	692
8	2	2	Shekhoo .....	251	704	218	781	233	700	264	772	300	806	372	933
9	1	1	Amur .....	64	189	56	170	114	282	152	399	178	500	133	307
10	1	1	Munahim ....	172	469	147	263	192	504	222	527	337	804	190	480
11	2	2	Kuttal .....	85	257	97	283	133	387	207	506	190	577	108	285
			Total....	1,806	5,302	1,923	5,277	2,128	6,444	2,382	6,324	2,776	7,022	2,431	6,063

## No. 1.

seven years, from 1859-60 to 1865-66, together with the extent of Remissions granted, and on the average past Revenue, and the Revenue of the year 1865-66.

Revenue.		Extent of Remission granted during the seven years.		Percentage of the Remission on the Revenue of the seven years.		Total average of Cultivation and Revenue on the seven years from 1859-60 to 1865-66.		As per Survey		Percentage Increase and Decrease by the Survey		Additional sources of Land Revenue not included in the foregoing Table.		REMARKS.					
1865-66.	1859-60.									In 1859-60	Decrease in 1865-66								
Acres.	Rupees.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4
Sehra.																			
770	1,750	586	310	1,030	2,640	1,105	2,090	11	21	11	21	117	102						
1,373	2,835	285	106	1,679	3,633	3,577	4,192	17	38	14	21	581	451	2,320					
Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2,149	4,585	871	102	2,709	6,179	4,685	6,724	14	21	17	17	701	553	2,703					
Munahim.																			
1,700	4,270	11	04	1,356	3,584	3,600	4,033	12	11	12	27	136	82	1,801					
258	647	142	323	223	62	816	830	33	30	10	34	03	57	1,819					
232	585	30	57	263	756	837	874	15	18	11	31	8	4	784					
129	275	..	..	116	303	322	400	32	45	14	20	44	20	657					
224	476	..	..	212	501	627	606	18	46	12	20	42	19	313					
134	325	99	378	136	374	437	531	42	60	14	32	12	9	798					
2,746	6,587	283	60	2,313	6,147	6,710	7,350	19	12	12	20	337	200	6,115					

## STATEMENT

No. of the Deh or Village.	General nature of Cultivation.	Class of Deh or Village.	Name of the Deh.	Actual extent of Cultivation and											
				1850-00.		1800-01.		1861-62.		1862-68.		1868-64.		1864-00.	
				Acres.	Rupces.	Acres.	Rupces.	Acres.	Rupces.	Acres.	Rupces.	Acres.	Rupces.	Acres.	Rupces.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
															<i>Tuppa</i>
12	c	1	Dura .....	1,316	3,146	1,226	3,538	1,458	4,040	1,965	5,069	2,672	5,993	1,921	4,889
13	c	3	Wind Parya....	312	833	323	1,121	395	1,256	435	1,325	524	1,289	472	1,392
15	c	4	Kubkat .....	723	1,462	415	960	237	670	585	1,307	568	1,006	908	1,630
15	..	..	Kainchee.....	..	..	..	..	..	..	..	..	..	..	..	1st Class
16	..	..	Dhocrau .....	..	..	..	..	..	..	..	..	..	..	..	1st Class
			Total ....	2,351	5,441	1,963	5,628	2,090	5,966	2,985	7,701	3,764	8,288	3,256	7,911
															<i>Tuppa</i>
17	c	1	Mora .....	1,090	3,106	1,045	3,519	976	3,465	944	3,240	1,300	3,180	1,338	3,593
18	c	1	Dulchund ....	863	2,624	739	2,390	791	2,687	803	2,626	890	2,337	865	2,436
19	c	1	Billal .....	196	426	200	448	200	452	228	565	283	557	282	603
20	c	1	Korace.....	707	1,208	895	1,281	916	1,442	1,241	1,850	1,345	1,955	1,364	2,016
21	c	1	Khokur .....	387	767	375	744	410	888	462	943	513	978	422	890
			Total....	3,333	8,221	3,254	8,391	3,302	8,934	3,678	9,164	4,331	9,007	4,271	9,547
															<i>Tuppa</i>
22	c	1	Khejro Dera ..	1,274	2,256	627	1,209	1,546	2,916	1,854	3,391	2,334	3,823	1,643	3,237
23	c	1	Shahpoor .....	470	1,041	381	900	542	1,329	700	1,734	1,337	2,878	1,095	2,258
24	c	1	Bet Boodho....	365	787	128	320	307	826	526	1,253	803	1,767	687	1,574

**No. 1—continued.**

Revenue.		Extent of Remission granted during the seven years.	Percentage of the Remission on the Revenue of the seven years	Total average of Cultivation and Revenue on the seven years from 1859-60 to 1865-66.		As per Survey.		Percentage Increase and Decrease by the Survey Rate.				Average rate per acre on the Survey assessed culturable lands entered in Col. 29.	Proportion rate per acre on the Survey assessed culturable lands entered in Col. 30.	Additional sources of Land Revenue not included in the foregoing Table.			REMARKS.
Acrea.	Rupees.			Acrea.	Rupees.	Extent of the Survey assessed culturable acreage, excluding lands out of cultivation for a period exceeding seven years.	Survey Assessment.	Increase on the past 7 years average.	Decrease on the Revenue of 1855-60	Decrease on the last 7 years average	Decrease on the Revenue of 1855-60			Survey assessed culturable lands divided into Nos., but which have been waste for a period exceeding 7 years.	Large waste un-assessed culturable tracts available for Revenue and future cultivation.		
17	18	10	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4
Wad Pagya.																	
1,722	4,344	469	1-51	1,754	4,431	4,061	6,136	1-18	...	...	...	1-5	2-8	291	382	8,384	
315	733	62	78	397	1,156	1,547	1,485	30	100	...	...	1-0	4-0	11	86		
383	1,344	...	...	545	1,199	2,330	1,642	37	22	...	...	0-11	4-9	529	261	17,169	
Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
2,420	6,420	1,523	3-2	2,606	6,76	8,81	9,551	4	18	...	...	1-1	3-3	93	628	25,799	
Mora.																	
902	2,771	1	..	1,085	3,268	3,223	3,932	2	41	...	...	1-3	3-0	431	277	2,263	
045	1,863	..	..	800	2,425	2,093	2,597	7	39	...	...	1	2-0	214	191	307	
220	443	..	..	231	491	391	550	12	24	...	...	1-6	1-7	103	65	211	
637	1,494	361	3-18	1,071	1,619	942	1,374	...	...	...	...	..	1-8	262	199	53	
309	636	..	..	411	837	751	924	10	41	...	...	..	1-4	27	22	1,421	
3,013	7,210	362	...	3,598	8,640	7,500	9,428	9	30	...	...	1-4	2-1	1,440	754	4,255	
Guchero.																	
918	2,063	69	3-6	1,442	2,712	2,180	2,873	6	39	...	...	1-5	1-5	395	155	100	
662	1,355	306	2-06	742	1,642	1,250	1,611	...	19	2	...	1-5	1-7	444	306	1,826	
218	599	44	0-02	433	1,018	835	1,266	24	112	...	...	1-8	1-9	....	..	836	
* Also Reay Kutcha, Sy. No. 109, of 718 acres, not included.																	
+ Also Reay Kutcha, Sy. No. 105 to 110, of 244 acres, not included.																	

\* Also Reay Kutchu, Sy. No. 109, of 7 1/8 acres, not included.

+ Also Reay Kutchu, Sy. Nos. from 105 to 110, acres 244, not included.

## STATEMENT

No. of the Deh or Village.	General nature of Cultivation.	Class of Deh or Village.	Name of the Deh.	Actual extent of Cultivation and											
				1850-60.		1860-61.		1861-62.		1862-63.		1863-64.		1864-65.	
				Acres.	Rupces.	Acres.	Rupces.	Acres.	Rupces.	Acres.	Rupces.	Acres.	Rupces.	Acres.	Rupces.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
25	$\frac{1}{4}$ c $\frac{3}{4}$ s		1 Meerun Juttoo	188	450	175	400	211	487	315	937	551	1,320	447	1,231
26	$\frac{3}{4}$ c $\frac{1}{4}$ s		1 Guehgo .....	3,097	8,018	2,830	8,616	3,162	9,760	3,353	9,898	3,753	9,217	3,471	10,160
27	..	..	Kain Koor ....	..	..	..	..	..	..	..	..	..	..	2nd Class	
28	..	..	Bet Suffun ....	..	..	..	..	..	..	..	..	..	..	2nd Class	
			Total ....	5,304	12,582	4,111	11,541	5,803	15,133	6,837	17,113	8,678	19,255	7,348	18,466
															<i>Tuppa</i>
29	$\frac{1}{4}$ c $\frac{3}{4}$ s		1 Lulila .....	61	148	157	291	194	316	551	836	787	1,214	608	913
30	$\frac{3}{4}$ c $\frac{1}{4}$ s		1 Sunree .....	548	916	561	935	557	890	578	1,011	631	918	592	1,057
31	$\frac{1}{4}$ c $\frac{3}{4}$ s		1 Kulhora .....	521	788	418	706	480	782	515	818	527	846	507	830
32	$\frac{6}{15}$ c $\frac{9}{15}$ s		2 Kot Satabo ....	531	941	491	901	578	1,050	977	1,707	1,037	1,750	931	1,741
33	$\frac{16}{17}$ c $\frac{1}{17}$ s		2 Joonalo .....	483	1,140	399	960	419	954	608	1,303	780	1,628	661	1,718
34	s		1 Chunneja ....	91	145	21	5	40	153	82	186	120	196	143	263
35	..	..	Salyapoor .....	..	..	..	..	..	..	..	..	..	..	2nd Class	
			Total ....	2,238	4,072	2,080	3,898	2,236	4,145	3,311	5,814	3,908	6,602	3,408	5,572
															<i>Tuppa</i>
36	..	..	Gungo Thurr ..	..	..	..	..	..	..	..	..	..	..	..	..
37	$\frac{1}{4}$ c $\frac{3}{4}$ m		4 Amurjee .....	562	1,066	254	605	380	1,064	677	1,238	466	884	1,244	2,437

## No. I.—continued.

Revenue.		Extent of Remission granted during the seven years.		Percentage of the Remission on the Revenue of the seven years.		Total average of Cultivation and Revenue on the seven years from 1853-60 to 1865-66.		As per Survey.		Percentage Increase and Decrease by the Survey Rate.		Additional sources of Land Revenue not included in the foregoing table.		REMARKS.	
Acres.	Rupces.									In-crease.	De-crease.				
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
145	39	451	831	338	775	50	63	11	11	1-5	1-6	13	6	176	* Contains also Reay kutcha, Sy. No. 58, of 144 acres, not included.
2,005	8,476	179	28	3215	9,117	7,257	9,628	514	...	1-5	2-6	153	232	11,032	
Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	....	
Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	....	
4848	12,885	1040	...	6130	16,222	12,916	6,946	925	...	1-5	2-6	1458	799	14,120	
Poorun.															
534	913	1	38	406	633	713	1,903	1716	...	1-7	1-7	375	69	....	
524	865	..	..	572	950	1,033	1,178	2136	...	1-3	1-3	49	18	50	
406	665	..	..	488	776	739	978	2,550	...	1-6	1-5	16	10	748	
684	1,244	23	25	747	1,333	2,036	1,963	433	...	0-15	2-9	227	168	2,051	
480	1,139	8	99	540	1,293	1,874	1,619	2841	...	0-13	3-4	429	210	516	
104	164	8	755	88	167	160	1178	77	...	1-1	2-0	18	4	....	† The assessment of Mukkan Pye. † Contains Kyot-tree Mukkan, in part Bumbha Dera, Sy. No. 1, acres 600 of Reay kutcha land.
Jagheer. †	..	..	..	..	..	..	..	..	..	..	..	..	..	....	
2,782	4,990	136	37	2,852	5,156	6,531	6,866	393	...	1-1	2-3	1,105	479	3,365	
Sunsaoree.															
1,119	2,287	722	754	672	1,300	1,669	1,476	8	...	0-15	2-4	263	133	3,619	

\* Contains also Reay kutcha, Sy. No. 59, of 144 acres, not included.

† The assessment of Makkan Pye.  
† Contains Ryot-tee Makkan, in part Bumbha Dera, Sy. No. 1, acres 500 of Reay kutcha land.



## STATEMENT

No. of the Deb or Village.	General nature of Cultivation.	Class of Deb or Village.	Name of the Deb.	Actual extent of Cultivation and											
				1850-60.		1860-61.		1861-62.		1862-63.		1863-64.		1864-65.	
				Acres.	Rupces.	Acres.	Rupces.	Acres.	Rupces.	Acres.	Rupces.	Acres.	Rupces.	Acres.	Rupces.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
38	c	5	Makhund .....	74	154	71	210	57	173	181	353	143	291	154	306
39	11 12 c 1 13 m	5	Pubjo .....	1,218	2,520	1,002	2,900	1,281	3,055	1,963	4,218	1,774	3,281	1,550	3,339
40	6 c 8 m	4	Sunsarve ....	1,170	2,736	1,146	3,106	1,451	3,702	1,028	4,282	1,147	2,359	1,417	3,242
			Total....	3,021	6,481	2,406	6,318	3,164	7,974	4,751	10,094	3,593	6,115	4,303	9,815
41	3 c 4 s	1	Dowlutpoor....	666	1,672	931	1,613	1,192	2,038	1,254	2,171	1,116	1,919	1,115	2,169
42	3 c 4 d 4 s	1	Phulel .....	449	828	374	748	572	1,256	677	1,337	813	1,591	617	1,195
43	0 10 c 1 10 m	3	Khurr .....	105	570	200	452	180	308	319	635	454	164	309	612
44	c	4	Malwah .....	451	1,004	367	1,023	405	1,340	568	1,302	525	1,241	614	1,471
45	c	4	Kundee Surmun	330	752	406	891	345	819	320	705	26	549	245	500
46	..	..	Allah Khare ..	..	..	..	..	..	..	..	..	..	..	2nd Class	
47	..	..	Gahind .....	..	..	..	..	..	..	..	..	..	..	2nd Class	
48	..	..	Nungur .....	..	..	..	..	..	..	..	..	..	..	2nd Class	
4	..	..	Koondah .....	..	..	..	..	..	..	..	..	..	..	2nd Class	
50	..	..	Meerpoor .....	..	..	..	..	..	..	..	..	..	..	A submerged	
51	..	3	Rajawah .....	28	75	21	75	129	338	94	203	117	226	86	204

## No I.—continued.

Revenue.		Extent of Remission granted during the seven years.		Percentage of the Remission on the Revenue of the seven years.		Total average of Cultivation and Revenue on the seven years from 1859-60 to 1895-66.		As per Survey.		Percentage Increase and Decrease by the Survey Rate.		Average rate per acre on the Survey Assessed Culturable lands entered in Col. 29.		Proportion rate per acre on the Survey Assessed Culturable lands entered in Col. 30.		Additional sources of Land Revenue not included in the foregoing table.			REMARKS.
Acres.	Rupees.									Increase.	Decrease.					Survey assessed culturable lands divided into Nos., but which have been waste for a period exceeding 7 years.	Large waste unassessed culturable tracts available for Baranet and future cultivation.		
17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4		
111	257	15	85	113	252	467	27	10	9	...	0-9	4-1	58	17	12,065				
1,289	3,892	8	04	1,438	3,096	6,991	3,35	9	10	...	0-9	4-2	194	456	3,537				
1,591	3,821	..	..	1,497	3,320	4,639	3,914	15	...	2	0-13	3-3	416	222	53,830				
4,110	9,257	745	132	3,639	8,937	12,806	9,925	10	...	3	0-15	3-5	1,656	828	83,671				
Dowlutpoor.																			
619	1,242	4	03	1,012	1,835	2,053	1,984	8	50	...	0-15	2-0	115	69	.....			* Also Reay Kutchah, Sy. No. 174, of 1538 acres, not included.	
356	715	..	..	551	1,689	1,338	1,459	38	99	...	1-2	2-4	62	39	550				
288	528	27	70	279	552	1,059	751	36	12	...	0-12	3-8	280	120	....				
634	1,438	51	57	522	1,280	1,732	1,461	14	1	...	0-14	3-3	43	19	720				
35	734	..	..	333	707	998	751	6	2	...	0-12	3-0	243	118	944				
Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Village.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
52	119	11	88	75	177	609	683	..	..	..	..	..	69	62	1,465			† Partly Jagheer, a portion of this land has lately fallen to Government (last year).	

\* Also Reay Kutch, Sy. No. 174, of 1538 acres, not included.

† Partly Jagheer, a portion of this land has lately fallen to Government (last year).

## STATEMENT

No. of the Taluk or Village.	General nature of Cultivation.	Class of Taluk or Village.	Name of the Taluk.	Actual extent of Cultivation and											
				1859-60.		1860-61.		1861-62.		1862-63.		1863-64.		1864-65.	
				Acre.	Rupces.	Acre.	Rupces.	Acre.	Rupces.	Acre.	Rupces.	Acre.	Rupces.	Acre.	Rupces.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
52	c	4	Talee .....	437	974	546	1,866	430	1,085	502	1,143	320	703	572	1,282
53	..	..	Dim .....	..	..	..	..	..	..	..	..	..	..	1st Class	
54	..	..	Jurkharo ....	..	..	..	..	..	..	..	..	..	..	2nd Class	
55	c	1	Koundah Nundo	292	891	178	453	212	642	147	668	487	1,288	286	704
Total....				3,145	6,553	3,032	6,557	3,510	7,806	3,971	8,274	4,179	8,382	3,844	8,218
Total of the Talooka .....				23,542	55,047	21,497	53,508	25,005	63,567	31,105	71,927	34,458	71,008	31,600	72,568

Settlement Office, Hyderabad, 19th October 1866.

## No. 1.—continued.

Revenue.		Extent of Remission granted during the seven years.		Percentage of the Remission on the Revenue of the seven years.		Total average of Cultivation and Revenue on the seven years from 1859-60 to 1865-60.		As per Survey.		Percentage Increase and Decrease by the Survey Rate		Additional sources of Land Revenue not included in the foregoing table.		REMARKS.			
1865-66.										In-crease.	De-crease.						
Acres.	Rupces.	10	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
17	18																
427	952	..	..	473	1,063	1,977	1,333	30	16	..	..	11	42	256	107	1,085	
Jagheer.		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Jagheer.		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
304	886	..	..	226	791	* 641	617	..	18	2	..	13	23	136	170	3,285	* Contains also two Bray kutchas Nos. 59 and 60, of 109 acres, not included.
3,087	6,084	9	19	3,531	7,595	10,400	9,161	22	37	..	..	14	29	1,200	1,614	8,899	
25,049	53,624	5,061	12	27,464	64,020	203,510	73,979	12	56	..	..	11	25	8,410	4,905	148,997	

E. L. TAVERNER, Major,  
Settlement Officer, Left Bank Districts.

# STATEMENT No. II.

CONTRASTED STATEMENT of the average extent of Cultivation and Revenue during a period of seven years, from 1859-60 to 1865-66, with the Assessed Culturable Area, and probable realizations in the proposed Survey Rates of Assessment.

No. of the Deh or Village.		General nature of Cultivation.		Name of the Deh		Contrast, Past Average and Survey		CULTIVATION AND REVENUE										TOTAL.	
								LAURHAF				RUBBER							
								Kharif and Winter Crops		Rice Land		Perennial Wheel Land watered by natural overflow		Land watered from wells					
								Acres	Rupess	Acres	Rupess	Acres	Rupess	Acres	Rupess	Acres	Rupess	Acres	Rupess
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12
								1	2	3	4	5	6	7	8	9	10	11	12

[illegible]

## STATEMENT NO. II.—continued.

CULTIVATION AND REVENUE.																						
No. of the Deb or Village.		General nature of Cultivation.	Class of Deb or Village.	Name of the Deb.	Contract, Past Aver- age and survey.	KHURREEF.						RUBBER.						TOTAL.				
						Inundation Wheel Land, including Cotton & superior crops		Kurreef Land on a lower level, irrigated without machinery.		Gardens Baghat.		Rice Land. Shalles or Sarie.		Penhual Wheel Land. Dhate.		Land watered by natural overflow. Sullab.				Land watered from wells. Chalee.		
						Acres.	Rupess.	Acres.	Rupess.	Acres.	Rp.	Acres.	Rupess.	Acres.	Rupess.	Acres.	Rupess.			Acres.	Rupess.	
1	2		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
14	2 c 2 m			Kubkat .....	Past average ..	314	756	174	205	..	..	1	2	17	49	30	95	..	..	545	1,160	
				Do. ....	Survey.....	1,705	1,157	531	485	..	..	..	..	..	..	..	..	..	..	2,339	1,642	
15	..			Kainchee.....	.....	1st Class Jaghur		..		..	..	..	..	..	..	..	..	..	..	....	....	
16	..			Dheerun .....	.....	1st Class Jaghur.		..		..	..	..	..	..	..	..	..	..	..	....	....	
						Tuppa Mora.																
17	2 2 c 2 m			Mora .....	Past average ..	754	2,405	1	3	..	..	1	1	129	407	136	249	64	208	1,085	2,268	
				Do. ....	Survey.....	2,889	2,714	..	..	6	30	1	1	357	1,140	2	3	68	95	3,323	3,983	
18	2 2 c 2 m			Dudhward .....	Past average ..	560	1,758	..	..	..	..	..	..	186	541	37	71	17	54	800	2,425	
				Do. ....	Survey.....	1,719	1,661	..	..	8	30	..	..	203	584	132	278	32	94	2,083	2,507	

19	30	1	884	180	1	3	..	..	..	..	24	70	112	212	5	16	231	491
	10	Do.	Past average ..	258	..	..	..	..	..	..	37	109	85	171	11	34	391	550
20	30	1	72	220	16	28	..	6	14	..	46	115	939	1,241	1	1	1,071	1,619
	10	Do.	Past average ..	233	..	..	..	..	..	..	44	111	605	1,066	..	..	942	1,374
21	30	1	75	135	3	5	..	..	..	..	110	24	215	338	8	25	411	837
	10	Do.	Past average ..	263	..	..	..	..	..	..	17	52	456	607	13	17	751	924
22	30	1	255	633	1	27	..	7	1	..	84	959	1,078	1,714	..	..	1,442	2,712
	10	Do.	Past average ..	834	..	..	..	..	..	..	93	242	1,233	1,703	..	..	2,180	2,873
23	30	1	321	763	1	25	..	..	..	..	74	274	331	638	1	1	742	1,642
	10	Do.	Past average ..	714	..	..	..	..	..	..	88	230	417	601	2	1	1,250	1,611
24	30	1	61	233	2	4	..	1	1	..	64	267	271	508	..	..	438	1,018
	10	Do.	Past average ..	241	..	..	..	..	..	..	73	187	517	797	..	..	835	1,266
25	30	1	67	212	4	6	..	3	7	..	28	139	192	427	..	..	303	775
	10	Do.	Past average ..	65	..	..	..	..	..	..	23	53	413	541	..	..	501	668
26	30	1	1,509	4,018	22	45	..	2	4	..	53	2,152	1,033	2,197	34	129	3,215	8,145
	10	Do.	Past average ..	5,213	..	..	3	12	..	..	539	1,808	1,401	2,146	95	194	7,350	9,628



## STATEMENT NO. II.—continued.

No. of the Deh or Village.		General nature of Cultivation.		Name of the Deh.		CULTIVATION AND REVENUE.												Total.			
				Class of Deh or Village.		KHURREEF.						RUBBEE.									
						Inundation Wheel Land, including Cotton & superior crops.		Khurreef Lands on a level without machinery.		Gardens. Baghait.		Rice Land. Shallee or Sarie.		Pecennial Wheel Land. Dhake.		Land watered by natural overflow. Sallub.		Land watered from wells. Chakoe.			
						Acres.	Rupees.	Acres.	Rupees.	Acres.	Rs.	Acres.	Rupees.	Acres.	Rupees.	Acres.	Rupees.	Acres.	Rupees.	Acres.	Rupees.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
27	..	..	Kaim Koor .....	.....	..	..	2nd Class Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	..
28	..	..	Bet Saffun .....	.....	..	..	2nd Class Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Teppa Poorun.																					
29	1 100	1	Lullia .....	Past average ..	62	165	4	8	..	..	1	2	17	42	307	411	17	41	408	669	
	5 100		Do. ....	Survey .....	108	76	31	33	..	..	..	..	..	..	547	868	56	23	713	1,000	
30	2 100	1	Sarree .....	Past average ..	200	394	9	13	..	..	5	12	6	15	349	507	3	9	572	950	
	3 100		Do. ....	Survey .....	620	518	..	..	..	..	..	..	..	..	412	653	1	1	1,033	1,178	
31	1 100	1	Kulhora .....	Past average ..	97	170	1	1	..	..	..	..	27	65	352	509	11	31	488	776	
	2 100		Do. ....	Survey .....	224	174	..	..	2	13	..	..	..	..	513	811	..	..	738	998	
32	1 100	1	Kot Satabo .....	Past average ..	287	538	185	268	..	..	4	10	1	3	189	266	103	216	747	1,533	
	2 100		Do. ....	Survey .....	976	947	791	690	2	8	12	20	..	..	94	46	101	152	2,056	1,803	

35	$\frac{1}{2} c$	Joonalo .....	Past average ..	346	886	46	88	..	..	13	32	2	3	56	81	86	178	549	1,363
36	$\frac{1}{2} c$	Do. ....	Survey .....	1,660	1,367	27	27	2	7	..	..	..	..	84	90	101	119	1,874	1,410
37	$\frac{1}{2} c$	Chnjeja .....	Past average ..	20	63	5	11	..	..	1	3	1	3	61	85	..	..	88	165
38	$\frac{1}{2} c$	Do. ....	Survey .....	..	..	..	..	..	..	..	..	..	..	168	178	..	..	166	178
39	$\frac{1}{2} c$	Salyspoor .....	.....	..	..	2nd Class Jagheer	..	..	..	..	..	..	..	..	..	..	..	..	..
40	$\frac{1}{2} c$	Gungo Thurr ..	.....	..	..	Tuppa Sunstoree	..	..	..	..	..	..	..	..	..	..	..	..	..
41	$\frac{1}{2} c$	Amurjee .....	Past average ..	280	631	350	678	..	..	..	..	3	4	39	34	..	..	672	1,369
42	$\frac{1}{2} c$	Do. ....	Survey .....	651	639	954	846	..	..	..	..	..	..	..	..	..	..	1,609	1,476
43	$\frac{1}{2} c$	Makbund .....	Past average ..	94	214	14	27	..	..	..	..	4	9	1	2	..	..	113	252
44	$\frac{1}{2} c$	Do. ....	Survey .....	497	278	..	..	..	..	..	..	..	..	..	..	..	..	487	278
45	$\frac{1}{2} c$	Pubjo .....	Past average ..	1,024	2,310	264	511	..	..	6	15	54	120	90	131	..	..	1,438	3,096
46	$\frac{1}{2} c$	Do. ....	Survey .....	5,721	3,110	370	247	..	..	..	..	..	..	..	..	..	..	6,081	3,957
47	$\frac{1}{2} c$	Sunsoree .....	Past average ..	1,002	2,652	228	443	..	..	2	5	40	120	68	90	1	1	1,407	3,320
48	$\frac{1}{2} c$	Do. ....	Survey .....	3,221	3,079	818	885	..	..	..	..	..	..	..	..	..	..	4,639	3,914
49	$\frac{1}{2} c$	Dowlutpoor .....	Past average ..	340	744	23	44	..	..	..	..	72	228	569	795	8	24	1,012	1,895
50	$\frac{1}{2} c$	Do. ....	Survey .....	1,321	1,095	30	42	1	2	..	..	34	121	649	769	19	25	2,033	1,984
51	$\frac{1}{2} c$	Phulal .....	Past average ..	206	478	5	9	..	..	..	..	54	158	286	444	..	..	551	1,089
52	$\frac{1}{2} c$	Do. ....	Survey .....	779	681	..	..	..	..	..	..	284	491	293	417	..	..	1,338	1,469

## STATEMENT No. II.—continued.

[illegible]

52	c	3 Taloo .....	Past average ..	450	1,002	1	2	..	..	1	62	21	..	..	2	..	473	1,083
		Do. ....	Survey .....	1,078	1,393	..	..	..	..	..	..	..	..	..	..	..	1,078	1,383
53	..	Dim. ....	.....	..	..	2nd Class Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..
54	..	Jurchohro ....	.....	..	..	2nd Class Jagheer.	..	..	..	..	..	..	..	..	..	..	..	..
55	c	1 Koonda Nundo.	Past average ..	201	583	25	49	..	..	..	19	7	..	11	106	42	286	791
		Do. ....	Survey .....	592	589	39	43	..	..	..	..	..	..	10	..	..	641	647
		Past average Total....		13,854	34,807	1,726	3,137	..	530	1,276	1,992	6,480	8,278	15,009	1,084	3,318	27,464	64,022
		Survey Total....		50,304	44,350	4,531	4,198	50	220	1,019	2,182	6,390	9,358	14,183	1,958	2,834	69,540	73,976

E. L. TAVERNER, Major,  
Settlement Officer, Left Bank Districts.

Settlement Office, Hyderabad, 19th October 1866.

**STATEMENT No. III.**

*STATEMENT showing the existing Rates of Assessment per Jureeb, on Wheel, on the actual extent of Cultivation, as ascertained by annual Measurement, for the Villages of the Tuppas of Sehra, Munchim, Wud Pugga, Mora, Guchero, Poorun, Sunsaoree, and Dowlutpoor, Talooka Mora, Hyderabad Collectorate.*

No. of the Deh or Village.	Name of Deh.	Name of Mukkan.	KHURREEF.				RUBBEE.			"Dake" and Well Lands, where the water is raised by wheels from a tank or well, per Jureeb.
			Woke, or Lands irrigated without the aid of machinery, per Jureeb	Rice Lands, per Jureeb	CHURKEE OR FOUNDATION WHEEL LANDS.		SAILAB OR LANDS WATERED BY NATURAL OVERFLOW.		Land first ploughed and then sown, per Jureeb.	
1	2	3	4	5	6	7	8	9	10	
					<i>Tuppa Sehra.</i>					
1	Kareja.....	Soottan Dehro ...	0 12	1 4	16 0	12 0	0 8	1 12	2 2	
		Kotree .....	0 12	1 4	16 0	12 0	0 8	1 12	2 2	
		Kareja ....	0 12	1 4	16 0	12 0	0 8	1 12	2 2	
		Soofanee .....	0 12	1 4	16 0	12 0	0 8	1 12	2 2	
2	Sehra .....	Sehra.. .....	0 12	1 4	15 0	12 0	0 8	1 12	1 12	
		Lowda .....	0 12	1 4	15 0	12 0	0 8	1 0	2 0	
		Doongo .....	0 12	1 4	15 0	12 0	0 8	1 0	1 10	
		Cheena .....	0 12	1 4	15 0	12 0	0 8	1 0	1 12	
		Vurria .....	0 12	1 4	15 0	12 0	0 8	1 0	1 12	
		Leyt .....	0 12	1 4	15 0	12 0	0 8	1 0	1 12	
		Mushooree.....	0 12	1 4	15 0	12 0	0 8	1 12	1 12	
		Theyha .....	0 12	1 4	15 0	12 0	0 8	1 10	1 14	
		Agrow .....	0 12	1 4	15 0	12 0	0 8	1 0	1 10	

**STATEMENT No. III.—continued.**

No. of the Deh or Village.	Name of Deh.	Name of Mukkan.	KHURKEEF.				RUBBEE.		"Daka" and Well Lands, where the water is raised by wheels from a tank or well, per Jureeb.
			Moke. or Lands irrigated without the aid of machinery, per Jureeb.	Rice Lands, per Jureeb.	CHURKEE OR INUNDATION WHEEL LANDS.		SAILAB OR LANDS WATERED BY NATURAL OVERFLOW.		
					When the wheel is fixed on the main canal, per Jureeb.	When placed on a kurria leading out from the main canal, per Jureeb.	"Huth Chuth," that is when the grain is thrown on to the ground without ploughing, per Jureeb.	Land first ploughed and then sown, per Jureeb.	
1	2	3	4	5	6	7	8	9	10
3	Furced Dera	.....			1st Class Jagheer			..	..
4	Ghungun....	.....			1st Class Jagheer			..	..
5	Deparja ....	.....			1st Class Jagheer.			..	..
					Tuppa Munahim.				
6	Sudhooja ....	Sudhooja .....	1 0	..	26 0 22 0	0 0 8	1 4	2 0	
7	Dooroo .....	Dooroo .....	1 0	..	26 0 22 0	0 0 8	1 0	1 14	
8	Shekhoo ...	Shekhoo .. .	1 0	..	26 0 22 0	0 0 8	1 0	1 14	
9	Amur .....	Amur .....	0 12	..	16 0 12 0	0 0 8	1 0	1 12	
10	Munahim....	Munahim ....	0 12	..	16 0 12 0	0 0 8	1 0	1 12	
11	Kuttal .....	Kuttal ...	0 12	..	16 0 12 0	0 0 8	1 0	1 12	
					Tuppa Wud Pagya.				
12	Duro .....	Duro .....	1 0	..	28 0 24 0	0 0 8	1 0	1 3	
		Varriaso .....	0 12	..	20 0 16 0	0 0 8	1 0	1 3	
		Gola Poteh ....	0 12	..	16 0 12 0	0 0 8	0 14	1 12	
13	Wud Pagya..	Wud Pagya .....	1 0	..	30 0 26 0	0 0 8	1 0	1 6	
14	Kuhkat ....	Kuhkat .....	0 14	..	20 0 16 0	0 0 8	1 4	1 14	
		Lowdree .....	0 14	..	20 0 16 0	0 0 8	1 4	1 14	
		Beylarow .....	0 14	..	20 0 16 0	0 0 8	1 4	1 14	

## STATEMENT No. III.—continued.

No. of the Deh or Village	Name of Deh	Name of Mukkan	KHURRERI.				RUBBEE		
			If ke on Lu gate without the aid of main canal, per Jureeb	Lands per Jureeb	CHURKPE OR FUNDATION WHEEL LANDS		SAILAR OR LANDS WATERED BY NA- TURAL OVERFLOW.		"Daka" and Well Lands, where the water is raised by wheels from a tank or wells, per Jureeb
					When the wheel is fixed on the main canal, per Jureeb	When placed on a kurrie letting out from the main canal, per Jureeb	"Huth Chuth," that is when the gram is thrown on to the ground without plough- ing, per Jureeb	Land first ploughed and then sown, per Jureeb	
1	2	3	4	5	6	7	8	9	10
15	Kamchee ..				1st Class Jagheer		...		.
16	Dheerun ..				1st Class Jagheer		..	..	..
					<i>Tuppa Moia</i>				
17	Moia	Mora ..	1 0		28 0 24 0		0 8	1 0	1 10
18	Dulchund	Dhull ..	1 0		28 0 24 0		0 8	1 0	1 8
		Chund ..	1 0		28 0 24 0		0 8	1 0	1 8
19	Billal ...	Illal ..	0 11		18 0 11 0		0 8	1 0	1 8
20	Koraee .	Korace .	0 12		20 0 16 0		0 8	0 14	1 4
		Machce .	0 12		20 0 16 0		0 8	0 14	1 4
21	Khokur .	Khokur	0 11		18 0 11 0		0 8	0 14	1 6
					<i>Tuppa Gucheko.</i>				
22	Kheno Deia	Kheno Dera	0 12		20 0 18 0		0 8	0 12	2 0
		Alme I Khan Lu gharee	0 12		20 0 18 0		0 8	0 12	2 0
		Lall Khan Lugharee	0 12		20 0 18 0		0 8	1 2	2 0
		Kulree .	0 12		20 0 18 0		0 8	1 4	2 0
	Antapoor	Boogia . . . .	0 12		18 0 11 0		0 8	1 0	1 14
		Boochayce ...	1 0		22 0 18 0		0 8	1 0	1 14
		Bait Dodo ...	1 0		26 0 22 0		0 8	1 0	2 0

**STATEMENT No. III.—continued.**

No. of the Doh or Village.	Name of Doh.	Name of Mukkan.	KNURREEF.				RUBBER.		
			Moke, or Lands irrigated without the aid of machinery, per Jureeb.	Rice Lands, per Jureeb.	CURRKEM OR INUNDATION WHEEL LANDS.		SAILAB OR LANDS WATERED BY NATURAL OVERFLOW.		"Daks" and Well Lands, where the water is raised by wheels from a tank or well, per Jureeb.
					When the wheel is fixed on the main canal, per Jureeb.	When placed on a kurna leading out from the main canal, per Jureeb.	"Ruth Chuth," that is when the grain is thrown on to the ground without ploughing, per Jureeb.	Land first ploughed and then sown, per Jureeb.	
1	2	3	4	5	6	7	8	9	10
24	Bet Boodho..	Bet Boodho .....	1 0 ..	22 0	18 0	0 8	1 0	2 0	
25	Meerun Juttoec.	Meerun Juttoec ..	0 12 ..	20 0	18 0	0 8	1 4	2 0	
26	Guchero ....	Guchero .. . . .	1 0 ..	30 0	26 0	0 8	1 4	2 0	
		Hait Chund .....	1 0 ..	30 0	26 0	0 8	1 8	2 0	
		Khalsoy .....	1 0 ..	30 0	26 0	..	..	..	
		Goondce .....	0 12 ..	16 0	12 0	0 8	1 0	2 0	
27	Kaim Koor ..	Kaim Koor .....	0 12 ..	21 0	22 0	0 8	1 0	1 12	
28	Bet Suffun ..	.....	..	2nd Class Jagheer.		..	..	..	
				Tuppa Poorun.					
29	Lullia .....	Lullia .....	1 0 ..	..	..	0 8	0 12	1 4	
30	Sunree .....	Sunree .....	0 12 ..	18 0	11 0	0 8	0 12	1 6	
31	Kulhora ....	Kulhora Khandia..	0 12 ..	16 0	12 0	0 8	0 12	1 4	
32	Kot Satabo ..	Dhilloo .....	0 12 ..	16 0	12 0	0 8	0 12	1 0	
		Poorun .....	0 12 ..	11 0	12 0	0 8	0 14	1 8	
		Almance .....	0 12 ..	14 0	12 0	0 8	0 12	1 0	
		Rubboo Shikaree ..	0 12 ..	14 0	12 0	0 8	0 1	1 0	
33	Joonalo ....	Joonalo .....	1 0 ..	21 0	20 0	0 8	0 12	1 0	
		Book .....	1 0 ..	20 0	16 0	0 8	0 12	1 0	



## STATEMENT No. III.—continued.

No. of the Deh or Village.	Name of Deh.	Name of Mukkan.	KHURREEF.				RUBBEE.		"Daka" and Well Lands, where the water is raised by wheels from a tank or wells, per Jureeb.
			Moke, or Lands irrigated without the aid of machinery, per Jureeb.	Rice Lands, per Jureeb.	CHURKKEE OR INUNDATION WHEEL LANDS.		SAILAS OR LANDS WATERED BY NATURAL OVERFLOW.		
					When the wheel is fixed on the main canal, per Jureeb.	When placed on a kurria leading out from the main canal, per Jureeb.	"Huth Chuth," that is when the grain is thrown on to the ground without ploughing, per Jureeb.	Land first ploughed and then sown, per Jureeb.	
1	2	3	4	5	6	7	8	9	10
34	Chunneja ....	Chunneja . . . . .	1 0 ..	..	..	..	0 6	0 12	1 4
35	Salyapoor ....	Bumba Dera . . . . .	..	2nd Class Jagheer.			0 8	0 12	1 12
				Tappa Sunsuoree.					
36	Gungo Thurr. ....	.....	..	..	..	..	..	..	..
37	Amurjee ....	Heytah . . . . .	1 0 ..	23 0	20 0	0 8	0 12	1 4	
38	Makhund ....	Makhund . . . . .	1 0 ..	23 0	20 0	0 8	0 12	1 4	
39	Pubjo . . . . .	Salyo Dairee . . . . .	1 0 ..	25 0	21 0	0 8	0 12	1 4	
		Soob Dairee . . . . .	1 0 ..	25 0	21 0	0 8	0 12	1 4	
		Bahadoor Dairee ..	1 0 ..	27 0	23 0	0 8	0 12	1 4	
		Dhurria Khan Dairee	1 0 ..	21 0	20 0	0 8	0 12	1 4	
		Moongow Dairee ..	1 0 ..	27 0	23 0	0 8	0 12	1 4	
		Kurria Dhairo ....	1 0 ..	27 0	23 0	0 8	0 12	1 4	
		Jadee . . . . .	1 0 ..	27 0	23 0	0 8	0 12	1 4	
		Kurrio Bakur Kowahown . . . . .	1 0 ..	27 0	23 0	0 8	0 12	1 4	
		Hairee . . . . .	1 0 ..	27 0	23 0	0 8	0 12	1 4	
		Kurrio Adam Khan Murree . . . . .	1 0 ..	27 0	23 0	0 8	0 12	1 4	

## STATEMENT No. III.—continued.

No. of the Deh or Village.	Name of Deh.	Name of Mukkan.	KHURREEF.				RUBBEE.		"Daka" and Well Lands, where the water is raised by wheels from a tank or wells, per Jureeb.
			Moke, or Lands irrigated without the aid of machinery, per Jureeb.	Rice Lands, per Jureeb.	CHURKEE, OR INUNDATION WHEEL LANDS.		SAILAB, OR LANDS WATERED BY NATURAL OVERFLOW.		
					When the wheel is fixed on the main canal, per Jureeb.	When placed on a kurris leading out from the main canal, per Jureeb.	"Huth Chuth," that is when the grain is thrown on to the ground without ploughing, Jureeb.	Land first ploughed and then sown, per Jureeb.	
1	2	3	4	5	6	7	8	9	10
40	Sunsaooree....	Sunn .....	1 0 ..	27 0 23 0	0 8	0 12	1 6		
		Booree Dairee ....	1 0 ..	27 0 23 0	0 8	0 12	1 6		
		Snowaree .....	1 0 ..	27 0 23 0	0 8	0 12	1 6		
		Kanjance .. . . .	1 0 ..	27 0 23 0	0 8	0 12	1 6		
		Dhowree Dairee ..	1 0 ..	27 0 23 0	0 8	0 12	1 6		
Tuppa Dowlutpoor.									
41	Dowlutpoor..	Dowlutpoor .....	1 0 ..	22 0 18 0	0 8	0 14	1 10		
		Kud Boolow .....	1 0 ..	22 0 18 0	0 8	0 14	1 10		
		Mamalee Peerzadow	1 0 ..	22 0 18 0	0 8	0 14	1 10		
42	Phulel .....	Phulel .....	1 0 ..	20 0 18 0	0 8	0 14	1 8		
		Doong Meeance ..	1 0 ..	21 0 20 0	0 8	0 14	1 8		
43	Khurr .....	Khurr .....	0 14 ..	24 0 20 0	0 8	0 14	1 8		
		Kurrio Sownee....	0 14 ..	22 0 18 0	0 8	0 14	1 8		
		Sonawah .....	0 14 ..	22 0 18 0	0 8	0 14	1 8		
		Sunjur Dairee ....	0 14 ..	22 0 18 0	0 8	0 14	1 8		
		Loondow .....	0 14 ..	22 0 18 0	0 8	0 14	1 8		
		Peerano Dairee....	0 14 ..	22 0 18 0	0 8	0 14	1 8		

**STATEMENT No. III.—continued.**

No. of the Deh or Village	Name of Deh	Name of Mukkam	KHURREEF				RUBBER.		"Daka" and Well Lands, where the water is raised by wheels from a tank or wells, per Jureeb.
			M/ke, or Lands irrigated without the aid of machinery, per Jureeb	Rice Lands, per Jureeb	CHURKEEF, OR INUNDATION WHEEL LANDS.		SALTAR OR LANDS WATERED BY NATURAL OVERFLOW.		
					When the wheel is fixed on the main canal, per Jureeb.	When placed on a kurria leading out from the main canal, per Jureeb.	"Hath Chuth," that is when the grain is thrown on to the ground without ploughing, per Jureeb	Lands first ploughed and then sown, per Jureeb	
1	2	3	4	5	6	7	8	9	10
44	Malwah .. .	Malwah.. . . . .	0 14		26 0	22 0	0 8	0 14	1 8
		Kujoor Koor. . . .	1 0		26 0	22 0	0 8	0 14	1 8
		Nindo Tuckeer . .	1 0		24 0	20 0	0 8	1 8	2 0
45	Kundee Sa- mun.....	Kundee Saimun	0 14		25 0	21 0	0 8	0 14	1 1
46	Allah Khace..	Allah Khace.....	1 0		24 0	20 0	0 8	1 0	1 4
		Koor Chandia	1 0		24 0	20 0	0 8	1 0	1 4
		Koor Bahai . . .	1 0		24 0	20 0	0 8	1 0	1 4
47	Gahund	Gahund .. . . . .	1 0		23 0	20 0	0 8	1 0	1 1
48	Nungur ..	Nungur .....	1 0		22 0	18 0	0 8	1 0	1 4
49	Koondah ..	Koondah .....	1 0		30 0	26 0	0 8	1 8	1 8
50	Meerpoor ..	Meerpoor . . . .	0 12		15 0	12 0	0 8	0 12	1 0
51	Rajawah ..	Rajawah . . . .	4 0		25 0	21 0	0 8	0 12	1 0
52	Talce ....	Yaroo Daice . . .	1 0		25 0	21 0	0 8	1 0	1 8
		Pahar Daice ....	1 0		25 0	21 0	0 8	1 0	1 8
		Sobo Daice .. . .	1 0		25 0	21 0	0 8	1 0	1 8
		Soab Hatce Poto	1 0		25 0	21 0	0 8	1 0	1 8
53	Dim .....	.....			2nd Class Jagheer.				
54	Jurkoharo .	Jurkoharo . . . .	1 0		23 0	20 0	0 8	1 0	1 14
55	KoondaNundo	.....							

E. L. TAVERNER, Major,  
Settlement Officer, Left Bank Districts.

Settlement Office, Hyderabad, 19th October 1866.

# STATEMENT No. V.

STATEMENT showing the Amount realised from Baranee Cultivation during a period of seven years, from 1859-60 to 1865-66, in Talooka Mora, Hyderabad Collectorate.

Name of Deh.	No. of Deh	Name of Tupra	Amount realised.	Name of Deh.	No. of Deh	Name of Tupra	Amount realised.	Name of Deh.	No. of Deh	Name of Tupra	Amount realised.	Name of Deh.	No. of Deh	Name of Tupra	Amount realised.
1 Kareja.	1	Wad	Rs. 7	15 Kanchee	15	Gu-	100	27 Kam koor	27	Rs. 215	41 Dowlutpoor	41	41 Dowlutpoor	Rs. 7	
2 Sehra	2	Wad	7	16 Dheerua	16	Gu-	100	28 Bet Suffun	28	..	42 Phulel	42	42 Phulel	10	
3 Fureed Dera	3	Wad	7	17 Mora	17	Gu-	100	29 Lullia	29	..	43 Khurr	43	43 Khurr	93	
4 Ghungun.	4	Wad	7	18 Dulcland	18	Gu-	100	30 Sunree	30	1	44 Mulwah	44	44 Mulwah	39	
5 Deparja	5	Wad	7	19 Bilal	19	Gu-	100	31 Sulhora	31	1	45 Kundee Surmun.	45	45 Kundee Surmun.	..	
6 Sudooja	6	Wad	138	20 Korac	20	Pooruna	14	32 Kot Suto	32	1	46 Allah Khaee	46	46 Allah Khaee	..	
7 Dooro	7	Wad	37	21 Khokhur	21	Pooruna	14	33 Joonalo	33	1	47 Gahind	47	47 Gahind	..	
8 Shekoo	8	Wad	37	22 Khero Dera	22	Pooruna	4	34 Chunneya	34	..	48 Mungur	48	48 Mungur	..	
9 Amur	9	Wad	2	23 Shahpoor	23	Pooruna	4	35 Salyapoor	35	..	49 Koondah	49	49 Koondah	..	
10 Munahim.	10	Wad	2	24 Bet Boodho.	24	Pooruna	14	36 Gungo Thurr	36	With Sunsaoree	50 Meerpoor	50	50 Meerpoor	..	
11 Kuttal	11	Wad	2	25 Meeran Juttoee	25	Pooruna	14	37 Amurjee.	37	517	51 Rajawah	51	51 Rajawah	22	
12 Duro	12	Wad	129	26 Guchero	26	Pooruna	8	38 Mahkund	38	483	52 Talee	52	52 Talee	..	
13 Wad Parya	13	Wad	76	27 Guahero.	27	Pooruna	527	39 Pabyo	39	108	53 Dim.	53	53 Dim.	..	
14 Kuhkat	14	Wad	506	28 Guahero.	28	Pooruna	527	40 Sunsaoree	40	746	54 Jukoharo	54	54 Jukoharo	..	
				29 Guahero.	29	Pooruna	527				55 Koondah Nundo.	55	55 Koondah Nundo.	53	

E. L. TAVERNER, Major,  
Settlement Officer, Left Bank Districts.

## STATEMENT

## STATISTICAL RETURN of Houses,

Name of Deh.	No. of Houses.	Men and Boys.		Women and Girls.		Servants.		Total.		
		Above 12 years of age.	Under 12 years of age.	Above 12 years of age.	Under 12 years of age.	Men.	Women.	Men.	Women.	Boys and Girls under 12 years of age.
1	2	3	4	5	6	7	8	9	10	11
Kareja .....	25	49	25	37	20	..	..	49	37	45
Sehra .....	390	606	112	548	330	20	3	606	548	742
Furreed Dera ..	757	1,392	744	1,080	631	2	1	1,392	1,080	1,375
Ghungun .....										
Deparja .....	367	593	355	493	283	..	..	593	493	638
Sudhooja .....	261	482	309	361	216	26	.	482	361	525
Dooro .....	81	139	97	109	49	1	..	139	109	146
Shekhoo .....	70	122	74	98	64	..	..	122	98	138
Amur .....	45	77	45	55	42	..	..	77	55	87
Munahim .....	58	96	60	76	13	..	..	96	76	103
Kuttal .....	45	73	37	62	39	..	..	73	62	76
Durs .....	330	592	339	497	319	6	2	592	497	658
Wud Pagya .....	119	200	127	157	92	1	..	200	157	219
Kuhkat .....	148	220	128	197	117	..	..	220	197	245
Kainchee .....	39	108	71	105	51	..	..	108	105	122
Dheerun .....	56	126	70	97	54	..	..	126	97	121
Mora .....	408	668	426	475	344	7	1	668	475	770
Dulehund .....	130	231	122	187	109	3	..	231	187	231
Bilal .....	37	65	36	55	31	..	..	65	55	67

**No. VI.***Inhabitants, and Cattle, for Talooka Mora.*

Caste.			Cattle.						Ploughs.	REMARKS.
Mussalmans.	Hindoo.	Sweepers.	Horses and Mares.	Camels.	Bullocks.	Cows.	Buffaloes.	Donkeys.		
12	13	14	15	16	17	18	19	20	21	22
124	..	7	17	1	84	82	40	..	34	
1,497	391	8	78	24	953	976	267	225	348	
2,569	983	295	120	37	1,223	1,255	569	198	512	
1,206	471	47	45	30	470	418	100	89	200	
1,091	253	24	63	61	555	419	145	89	148	
304	82	8	6	55	135	72	37	30	33	
306	52	..	8	6	172	168	23	21	22	
196	21	2	6	3	162	142	41	16	33	
254	21	..	3	..	113	70	25	20	29	
167	44	..	7	4	115	6	26	16	32	
1,847	372	28	176	28	775	509	123	104	266	
501	75	..	16	11	386	214	23	41	70	
626	20	16	3	116	250	149	1	39	83	
265	70	..	5	25	137	120	17	17	51	
331	16	..	1	16	166	116	27	5	73	
139	734	40	32	33	419	337	56	221	109	
598	40	11	8	6	425	244	101	27	133	
125	36	26	5	..	126	94	86	8	40	

## STATEMENT

Name of Deh.	No. of Houses.	Men and Boys.		Women and Girls.		Servants.		Total.		
		Above 12 years of age.	Under 12 years of age.	Above 12 years of age.	Under 12 years of age.	Men.	Women.	Men.	Women.	Boys and Girls under 12 years of age.
1	2	3	4	5	6	7	8	9	10	11
Korae .....	209	384	232	323	181	2	1	384	323	413
Khokur .....	90	176	90	156	100	10	3	176	156	190
Kheiro Dera ....	199	362	217	284	167	4	..	362	288	314
Shahpoor .....	299	459	306	406	211	5	2	459	406	547
Bet Boodho .....	45	81	42	56	36	2	..	81	56	78
Mecrun Juttoee ..	5	98	52	96	34	1	1	98	96	86
Quchero .....	712	995	693	891	467	7	8	995	894	1,160
Kaim Koor .....	58	126	37	76	43	..	..	126	76	80
Bet Suffun .....	47	95	57	78	44	..	..	95	78	101
Lullia .....	56	118	67	91	44	..	..	118	94	111
Saurce .....	99	150	131	126	92	1	..	159	126	223
Khulhora .....	55	87	46	71	33	..	..	87	71	79
Kot Sutabo .....	237	466	283	341	205	8	..	466	341	488
Joonalo .....	207	365	237	308	201	3	..	365	308	438
Chuneja .....	107	182	109	161	72	..	..	182	161	181
Salyapoor .....	421	748	476	565	324	..	..	748	565	800
Gungo Thurr .....	..	..	..	..	..	..	..	..	..	..
Amurjee .....	105	166	142	132	97	..	..	166	132	239
Mahkund .....	80	136	67	100	26	1	..	136	100	93
Pubjo .....	216	440	219	327	216	5	1	440	327	435

## No. VI.—continued.

Caste.			Cattle.						Ploughs.	REMARKS.
Muslimans.	Hindoes.	Sweepers.	Horses and Mares.	Camels.	Bullocks.	Cows.	Buffaloes.	Donkeys.		
12	13	14	15	16	17	18	19	20	21	22
439	83	598	36	21	521	482	282	51	171	
395	85	42	15	1	150	111	63	41	53	
81	167	116	40	9	374	297	105	44	137	
1,049	345	18	34	11	388	316	90	153	113	
187	18	10	9	4	110	121	77	10	46	
234	16	30	71	..	108	104	42	8	35	
2,469	462	118	70	376	1,042	747	284	173	394	
261	21	..	1	5	177	87	3	9	71	
203	60	11	11	1	77	79	27	34	29	
148	44	131	9	9	182	116	72	11	41	
438	34	36	12	11	304	228	127	21	89	
218	19	..	12	2	139	140	94	23	43	
1,056	132	107	35	38	698	555	211	57	204	
1,028	52	31	24	21	554	476	201	54	183	
318	184	22	18	..	172	154	47	54	65	
1,209	900	4	37	25	702	650	148	144	295	
..	..	..	..	..	..	..	..	..	..	
461	65	..	20	163	220	159	..	19	76	
325	4	..	2	108	103	48	..	8	35	
1,017	159	26	44	122	746	454	35	92	227	



**STATEMENT**

Name of Deh.	No. of Houses.	Men and Boys.		Women and Girls.		Servants.		Total.		
		Above 12 years of age.	Under 12 years of age.	Above 12 years of age.	Under 12 years of age.	Men.	Women.	Men.	Women.	Boys and Girls under 12 years of age.
1	2	3	4	5	6	7	8	9	10	11
Sunsaoree.....	283	427	330	363	227	..	..	427	363	557
Dowlutpoor.....	258	450	355	381	245	8	..	450	381	600
Phulel .....	52	86	63	79	36	..	1	86	79	99
Khurr .....	69	95	55	80	36	..	..	95	80	91
Mulwah .....	111	164	82	138	72	2	2	164	138	154
Kundee Surmun ..	34	50	29	34	21	..	..	50	34	50
Allah Khaie....	167	284	202	231	130	..	..	284	231	332
Gahind.....										
Nungur .....										
Koondah .....	..	..	..	..	..	..	..	..	..	..
Meerpoor .....	..	..	..	..	..	..	..	..	..	..
Rajawah .....	53	79	48	63	34	..	..	79	63	82
Talee .....	88	132	100	120	73	1	..	132	120	173
Dim .....	355	640	375	502	248	..	..	640	502	623
Jurkohareo .....	13	16	9	11	5	..	..	16	11	14
Koonda Nundo ..	78	147	97	123	78	..	..	147	123	175
Total....	8,307	14,052	8,755	11,412	6,662	124	26	14,052	11,412	15,417

**No. VI.—continued.**

Caste.			Cattle.							Ploughs.	REMARKS.
Musulmans.	Hindoo.	* Sweepers.	Horses and Mares.	Camels.	Bullocks.	Cows.	Buffaloes.	Donkeys.			
12	13	14	15	16	17	18	19	20	21	22	
1,255	62	30	37	223	599	423	35	89	204		
871	515	45	48	15	509	438	138	209	138		
243	10	11	6	1	12	85	50	7	47		
254	12	..	11	25	176	101	..	10	60		
446	..	10	13	53	280	136	7	27	98		
120	10	4	3	29	141	86	4	7	45		
775	56	16	2	15	505	293	26	41	201		
..	..	..	..	..	..	..	..	..	..		
215	9	..	9	1	160	97	7	6	52		
377	44	4	8	25	237	115	11	19	73		
1,573	164	28	43	75	1,400	606	100	131	467		
41	..	..	..	..	15	13	2	3	3		
414	31	..	5	13	234	174	162	27	77		
31,466	7,444	1,971	1,084	1,861	17,780	13,372	4,097	2,718	6,088		

E. L. TAVERNER, Major,  
Settlement Officer Left Bank District  
*Settlement Office, Hyderabad, 19th October 1866.*

## PROCLAMATION.

*To all the Landholders and Cultivators of the Tuppas of Sehra, Munahim, Wud Pagya, Mora, Guchero, Poorun, Sunsadree, and Dowlutpoor, Talooka Mora, in the Hydrabad Collectorate.*

## BE IT KNOWN.

1. Government has decided upon introducing the Survey Settlement rates of Assessments into the above Tuppas, for a period of ten years, commencing from the Khurreef of 1867-68, Fuslee year 1278-79.

2. During this period Government guarantees that the rates fixed at the Jumabundee shall not be increased nor altered, and the survey assessment shall be held to cover all demands for imperial land revenue on the lands so assessed, with the exception of the reservation specially mentioned in the succeeding paragraph. • Provided always, that in manifest cases of mistake or fraud, it shall be competent to Government to cause such error or fraud to be rectified.

3. With reference to the foregoing paragraph Government reserves to itself the right of levying such further cess upon the land as may be, by law, from time to time, imposed for educational and local purposes, and secondly, should Government hereafter construct or improve canals or other irrigational works in the settled tuppas above-mentioned, or to take up the clearance of canals now cleared at the cost of the zemindars and landholders, an increased assessment in proportion to the advantage thus accruing will be levied on all lands benefiting by such improvements.

4. The principle of the survey settlement is to divide the culturable land of each description of cultivation into estates or fields, called survey Nos., and to place an assessment on such lands to be paid by the holder, whether he cultivates his fields or not, so long as the land remains in the Government khata in his name. [It being a rule that the field and the fallows required shall in all cases be considered as constituting one number, which must be all retained or relinquished. F. P.]

5. For the first year of the settlement all lands that have been entered at the time of measurement and classification in the name of the holder on the survey register, will, unless relinquished by him, being present, or, in his absence, by his authorized agent, be finally entered in his name at the time of jumwabundee, and he will be held responsible for the payment of the assessment for that year.

6. At the time of jumwabundee, any landholder being then present or probably represented, may relinquish the whole, or any part of his holdings, provided only that survey Nos. be not broken up, but it must be clearly understood that relinquishment of lands, whether at the time of jumwabundee, or at any subsequent period, entails the forfeiture for ever of all rights over the lands so relinquished.

7. In this manner, holdings, or parts of holdings being whole survey Nos., may be relinquished at any time during the period of the settlement, provided that notice of such intended relinquishment be given in writing to the Mooktyarkar on or before the 31st day of March in each year, and the holder's interest in, and liability on account of the holding so relinquished will be confined to the collection of the crop then growing therein, and the payment of the Government demand thereon for the year then current. [Subject to the additional clause to S. 4. F.P.]

8. All relinquished holdings will be put up to auction under the orders of the Collector, and disposed of in conformity with such instructions as may be issued from time to time by the Commissioner in Sind.

9. The co-sharers in a survey No. will be held severally and jointly responsible for the entire Government assessment placed upon the number; they may, however, freely sell or mortgage their share of the right of occupancy in each Survey No., and the purchaser of such share will become liable, under the Government Khatadar, for the assessment of the field or survey No., as if he were one of the original shareholders.

10. Government is pleased to allow all "kochas" or plantations of trees, now held free, under His Excellency Sir Bartle Frere's Circular No. 481, dated 6th March 1858, to continue to be so held, in accordance with the condition therein contained, viz: that they be kept up as plantations; otherwise, or if cultivated, or cropped, they will be liable to the payment of the survey assessment that has been paid [query, fixed? F.P.] for them in each case.

11. Holders and cultivators of survey Nos are bound to keep the survey boundary marks of their fields in preservation and repair, and wilful destruction of a boundary mark, or of a boundary line running around a survey No., or neglect in repairing such marks, &c., when ordered to do so is punishable by law.

12. The large waste tracts of land, within village boundaries that have never been cultivated or have fallen out of cultivation for a long period, and on which no assessment has been fixed at the time of the settlement, have been entered in the survey records in the name of Government, and persons desirous of bringing such lands into cultivation must apply to the Collector for a lease of the land required.

NOTICE, therefore, is hereby given that all persons having any interest, claim, or dispute in the land or lands of any survey No. or Nos. in the tuppas aforesaid, are required to present themselves either in person or by authorized agent, with their documents and witnesses, before the Settlement Officer, Left Bank Districts, on the day or days appointed for the jum-mabundee of the village in which the said land or lands is or are situated, and then and there to prove their claims and to take up their lands at the survey rates, or to sign a paper of relinquishment of the same. In the event of absence, or of the refusal of a party to sign the paper of relinquishment, all lands that have been recorded in his name without dispute, at the time of measurement and classification of the village, will be entered in the Government khata in his name, and he will be held responsible for the payment of the assessment

on such lands for the first year ; and in cases of disputed possession the Settlement Officer will, at once, settle the right of possession, on the amount of evidence then and there obtainable, and his award will remain in force until altered, revised, or set aside by the decree of a Civil Court ; and further be it known that any act done by the khatadar or chief shareholder of a holding or survey No. at the time of jumma bundee, without protest from or in the absence of the remaining shareholders shall be considered to be the act of the entire body of shareholders, and shall be adopted accordingly. [ I concur. F. P.]

No. 2526 OF 1866.

REVENUE DEPARTMENT.

From the COLLECTOR OF HYDRABAD,

To Major J. FRANCIS,

Survey Commissioner.

*Hydrabad, Collector's Office,*

*Camp Sheikh Birkio, 19th November 1866.*

SIR,— I have the honour to submit Major Taverner's report, No. 222, dated 19th October, with accompaniments, being his proposed settlement of the Mora Talooka of this Collectorate.

2. I request sanction that the lapsed Jagheer portion of Deh Kundo may be constituted into a separate Deh, as proposed in the Settlement Officer's 5th paragraph.

3. With reference to Major Taverner's 6th paragraph and the statements, I observe that the shares levied by Government on certain second class Jagheers, have not been interfered with, and I concur with him in considering that as regards this source of Government revenue, existing arrangements should be allowed to stand. And I presume also, that it is not intended to make any alteration in the system of leying water tax from the Jagheerdars, and with which they are, as a class, content.

4. This point must, however, remain so far open, that the receipt of the Hucaba report, promised in the Settlement Officer's 17th paragraph must be awaited; but I would beg to record my opinion that it is not desirable on grounds of general policy, and also owing to the poverty of the Jagheerdars as a class, to increase in any way the Government demands on their estates.

5. I agree generally with the opinion expressed in the Settlement Officer's 8th paragraph, except that I consider the land in the Sun Tuppa at the tails of the Dadwah to be very well supplied with water, especially about and south of Pubjo. Indeed the tail canal called the Meerwah, runs south into the Sukrind Talooka, and irrigates a large quantity of land in the Goram Murree Tuppa, nor has scarcity of water even at the extreme tail been ever experienced, since Government dug the new mouth to the Dadwah near the village of Mittance.

6. But Major Taverner is correct in stating that the supply from the tails of the Nowhikky (Baghwah and Moradwah) which flow into the north-eastern portion of Mora is fluctuating. This has engaged the attention of the Engineer officers, and to a certain extent the Moradwah has been improved, and a new mouth is proposed for the Baghwah.

7. I approve of the maximum rates proposed in the Settlement Officer's 10th paragraph, and which he has fixed after giving the local features and peculiarities of the Talooka careful consideration, whereas the temporary rates now existing were fixed with reference to the average revenue of each Deh, and more in order not to enhance this, than with a due regard to the capabilities of the locality; hence it has happened, that fertile portions have been more easily assessed than others less abundantly productive.

8. Major Taverner has, I think, judiciously fixed the rates for Sailab, Daka, and Wahce Moke lands along the Guchero, Mora; Munahim, and Sehra Tuppas. To the west of the Hyderabad road the soil is full of moisture and some fine dunds of water are always available for rubbee crops. The people may therefore look forward with certainty to a sufficiency of water.

9. I have no objection to the proposal made by the Settlement Officer in his 13th paragraph, regarding the mode of levying the revenue from the Moke Rubbee lands; the instalments may be equal in amount, and the number of instalments corresponds with that in which the revenue is usually levied.

10. I concur also in the proposal made in his 14th paragraph to lease the Korae cutcha lands.

11. As regards the cutcha lands named in paragraph 15, I would prefer a similar plan being adopted at the time of jumabundy, if possible, in order to avoid crop measurement. But if the zemindars are unwilling to take up the leases, there will be no other plan open than that of annual summary assessment after measurement, and at existing rates.

12. I recommend that the assessment of rain crops shall be left in the hands of the Collector, and that no attempt be made to make a permanent settlement of this description of cultivation.

13. The financial result of Major Taverner's proposed settlement, as shown in his 20th paragraph, may be considered favourable, and will in good seasons of rain be increased by rain cultivation in the Deh of Gunga Thurr, of the same Tuppa.

14. I have noted my opinion against each paragraph of the proposed proclamation.

I have the honour to be, &c.,

F. PHILLIPS, Collector.



## CORRESPONDENCE

RELATIVE TO THE

### SETTLEMENT OF THE MORA TALOOKA.

*Settlement Officer's Report No. 222 of 1866, and Collector's transmitting letter No. 2526, dated 19th November 1866.*

No. 33 OF 1866.

*Poona, 9th January 1867.*

Major Taverner's Report contains a full and interesting description of the natural features and capabilities of the district. Referring to its position, he explains that taking the Lukkee Hills as the natural division between Upper and Lower Sind, the Mora Talooka would form the most southern district, which, under this natural division of the country would belong to Upper Sind. And this boundary line is also said to indicate generally the division between the fertile tracts of the northern and the extensive sterile plains of the southern part of the Hyderabad Collectorate.

2. The Mora district contains a large proportion of this sterile sandy soil. From the town of Mora to Pabjo, a distance of between thirteen and fourteen miles, Major Taverner tells us "there is hardly a trace of cultivation to be met with, the soil being either sand or salt." And taking the entire talooka, I find that the assessed culturable portion of it bears the small proportion of only 15 per cent. to the total area.

3. Its water supply is uncertain and somewhat deficient also. The Dadwah and Meerwah canals are its main source of irrigation, but the district draws its supply mostly from the tail end of these feeders. The Collector considers the supply from the Dadwah to be somewhat better than Major Taverner

represents it to be, owing to the recent opening of the new mouth to it near the village of Mittanee. But, admitting the Collector's estimate to be correct, the irrigation of the district generally may nevertheless be said to be inferior when compared with that enjoyed by the adjoining districts of Nowshera and Kundiara.

4. Giving due weight to these circumstances, and to the general condition of the district, Major Taverner has made his rates lower than those fixed for the adjoining talooka of Nowshera, with the exception of the lands under moke irrigation—for which, for special reasons, he has made an increase of four annas upon the rate fixed for the same cultivation in Nowshera. The Collector considers the Settlement Officer's proposals to be generally suitable for the district, and there seems to be good ground for supposing they will be found to be so.

5. There is a novel feature in the cultivation of this district which seems to call for special remark from me. I allude to the irrigation from waces or pits, referred to in paragraphs 10, 11, and 12 of the Settlement Officer's report. I am satisfied as to the correctness of the principle upon which these lands have been classified, and consider that Major Taverner has acted judiciously in having distributed his increased rate over the whole tract where the irrigation prevails, instead of confining it merely to the lands where existing pits are met with. Inequality in the fall of rates on contiguous fields would have been the result had the latter system of operations been adopted, but by the plan followed the whole tract of country over which this water-bearing stratum extends is equitably assessed at a higher rate, in consideration of this inherent quality of the soil.

6. But although the plan of fixing the assessment is good, I am inclined to think the increased rate is not quite so high as it might be. According to Major Taverner's description of the cultivation an alternate khurreef and rubbee crop can be grown with the aid of this water. It may be inferred from this, that the fallow generally given to lands cultivated as khurreef is not requisite where this semi-rubbee cultivation is carried on.

If such be the case an extra rate of two annas per acre seems scarcely sufficient to meet the difference between the value of this mixed and of purely khurreef cultivation.

7. The distribution of the extra rate over a large area may probably be the reason for its having been fixed rather low. I shall refer to the Settlement Officer for explanation upon this point, for as his judgment in assessment matters has been proved to be so good hitherto, I should hesitate in proposing any change in his rates until the fullest inquiry had been made. The result of this reference shall be communicated hereafter.

8. I am sorry to find both the Settlement Officer and Collector advocating the adoption of six instalments for the collection of the revenue from this mixed description of cultivation. This appears to me to be a retrograde movement, for we find in the Regulation Provinces that reducing the number of instalments tends to simplify revenue management, and gives more time to district officials for the performance of their other important duties. I should think that three instalments fixed for the rubbee season would meet the case, for whether a man grows a khurreef or a rubbee crop he would not, under such an arrangement, be called on to pay his Revenue till the time considered suitable for the latter crop. I recommend this subject to your attention, and shall be glad if you agree in the view I take of it.

9. Major Taverner appears to have regularly settled down into the plan of leaving "Baranee" cultivation to be managed by the system of an annual crop measurement. And the Collector evidently looks upon its adoption with considerable satisfaction. I am by no means satisfied, however, that this course is preferable to that which has been suggested for the assessment of this cultivation in a former report upon the subject. At any rate I should like to see the suggested plan tried experimentally in one or two villages, though Mora perhaps is not a district in which the experiment should be made.

10. Great caution should, I think, be exercised in giving facilities for the extension of this desultory and uncertain cultivation. For we shall assuredly find, that the cultivators will leave

their regular assessed lands for the Baranee if we put a low rate upon the latter. That there is a disposition to do so, may be inferred from the fact, mentioned by Major Taverner, of the wheel cultivation

Paragraph 16 of Settlement  
Officer's Report.

revenue having fallen in one year in the Sansaoreo Tuppa from Rs. 10,094 to Rs. 6,815, whilst there was a corresponding increase on the Baranee revenue. I think therefore that in districts where crop rates upon this cultivation are continued, they should be increased as a rate upon the introduction of the survey settlement, so as to have a deterrent effect upon its extension, and thereby secure the realization of the regular assessed revenue.

11. I would suggest that the Collector be called upon for a report upon this suggestion. The introduction of the settlement need not be deferred pending the reference in the matter, as the cultivators might be informed that they would hereafter be told on what plan the Baranee lands will, in future, be available to them for cultivation.

12. In his 17th paragraph Major Taverner refers to an Huccaba statement, which was sent to me some months since. It has just been returned by the Collector of Shikarpoor, to whom it was referred for his opinion. It has now been referred back to the Settlement Officer for his consideration of some modifications suggested by the Collector and myself, and will be handed on for final orders as soon as the points under discussion have been settled between us.

13. The Settlement Officer's proposals, adverted to in paragraphs 10 and 12 of Collector's letter, and approved of by that officer, appear to me to be suitable to the respective cases.

14. The Collector considers the financial result of the settlement to be favourable, and I agree that a measure which holds out promise of an increase of revenue varying from 12 to 25 per cent. when compared with past average, and last year's collections, irrespective of the assessment which may be realized from lands long out of cultivation, may certainly be regarded in that light.

J. FRANCIS, Major,  
Survey and Settlement Commissioner.

No. 1175.

*Revenue Survey and Assessment.*

## REVENUE DEPARTMENT :

*Bombay Castle, 25th March 1867.*

Letter from the Commissioner in Sind, No. 246, dated 31st January 1867—Submitting, with his observations, reports regarding the settlement made by Major Taverner, Settlement Officer, Left Bank Districts, of the Mora Talooka in the Hyderabad Collectorate; and stating that, in anticipation of the orders of Government, he has desired Major Taverner to introduce his Settlement.

Memorandum from the Commissioner in Sind, No. 443, dated 20th February 1867, with accompaniments—On the same subject.

RESOLUTION.—The Right Honorable the Governor in Council is pleased to sanction the imposition of these rates for a period of ten years. The financial results are an increase of some 12 per cent. over past average collections, viz. Rs. 73,979 as against Rs. 64,022.

2. The system on which the assessment on account of water derived from “wacees,” or pits, is to be imposed on all land containing a water-bearing stratum is approved; and from the explanation subsequently furnished by Major Taverner (Memorandum No. 15, dated the 21st January last), there can be no doubt that the rates proposed to be levied on this account are sufficiently high.

3. While fully concurring with Colonel Francis as to the evils that must unavoidably result from a system of assessment according to the nature of each year's crop, His Excellency the Governor in Council, for the reasons given by the Commissioner and the Collector, fears that it is impossible to do away with it in the plain villages. He will be glad to learn that the Baranee lands, situated at the foot of the hills, have been rented to the several village communities at a fixed small annual assessment.

4. The proposal to reduce the number of instalments cannot be acceded to, as it does not meet with the approval of the Commissioner, but no guarantee should be given which will prevent any future reduction of the number of instalments.

F. S. CHAPMAN,  
Chief Secretary to Government.

To

The COMMISSIONER in SIND.

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No. 103 of 1867.

To S. MANSFIELD, Esq.,  
Commissioner in Sind.

*Camp Myjee, 31st January 1867.*

SIR,—Referring to the remarks in paragraphs 6 and 7 of my  
Memorandum No. 33,\* upon the settle-  
ment proposed for the Mora Talooka, I

\* Dated 9th instant.

have the honour to append copy of a communication from Major  
Taverner, submitting the information called for regarding the  
assessment of the land irrigated from waees or pits.

2. From the Settlement Officer's explanation, it will be seen  
that the addition made to the ordinary khurreef rate for this wae  
cultivation is equivalent to an increase of about 20 per cent. I was  
led to suppose at first that he had added only *two annas* to his  
rate, but two annas represent only the nominal classification value,  
which, worked out in the calculation of the assessment, amounts,  
as before mentioned, to an addition of 20 per cent. on the actual  
assessment imposed.

3. Major Taverner's memorandum contains some further in-  
formation regarding the peculiarities of this cultivation. Judging  
from what he has explained, as also from the results of his opera-  
tions given in the statement appended, I am now fully satisfied that  
his rates for this description of cultivation have been fairly appor-  
tioned, with reference to the general pitch of the assessment of the  
district. I would therefore beg to recommend that his proposals  
for this cultivation be finally sanctioned, together with the other  
proposals previously submitted for sanction.

I have the honour to be, &c.,

J. FRANCIS, Lieut Colonel,  
Survey and Settlement Commissioner.

## MEMORANDUM No. 15 OF 1867.

In reply to the Survey and Settlement Commissioner's Memorandum No. 34, dated 9th January 1867, forwarding extract (paragraphs 5, 6, and 7) of his Memorandum, No. 33, dated 9th January 1867, on the subject of the Mora Assessment Report, the Settlement Officer, Left Bank Districts, has the honour to explain that the two anna enhancement therein referred to is a water classification, and not an actual money enhancement rate. The effect is to raise the rate per acre about one-fifth of the assessment. Thus a field ordinarily classed at 2 rupees, will, by this classification, be raised to Rs. 2-9 per acre. This is in accordance with the gradation of the Settlement Commissioner's own classification scales, to which the Settlement Officer has always adhered, both for the sake of uniformity, and for the additional facilities in consequence accruing for any general revision of rates throughout the Collectorate.

2. The increase thus given is, in the Settlement Officer's opinion, sufficient, for the following reasons. The extra rate per acre (which is spread over a wide area) has to be paid in all years whether the cultivation be khurreef or rubbee, and, in so far as the Settlement Officer can judge, there is not at present more than about one-fourth of the land over which this enhanced assessment has been placed under rubbee cultivation annually. This is to be accounted for in many ways. The waces become sooner exhausted than wells, and the area cultivated under them is consequently smaller, seldom exceeding from three to four acres; fallows are given but sparingly. Then it must always be remembered, that in the northern portion of the Hyderabad Collectorate there is no grass to speak of, so that cultivators are obliged to cultivate a certain area of jowaree and bajeree on account of the kurbee for the sustenance of their cattle; and, moreover, the villagers prefer having a proportion of both khurreef and rubbee lands to enable them to work their cattle throughout the two seasons. The Settlement Commissioner must himself have observed lands near



villages, that could grow rubbee crops, banded in to enable a khurreef crop to be raised upon them ; and the Settlement Officer is of opinion, that so long as the present scarcity of population and cattle continue, the people will prefer (whatever increased water facilities may be given them for rubbee or rice cultivation) to keep a large area under jowaree and bajaree crops, for the reasons above given. Consequently, although an increase of rubbee cultivation in these wae lands may be expected under the influence of the settlement, it will not, the Settlement Officer is of opinion, be so extensive as to warrant a higher enhancement (in anticipation) of assessment than that he has now fixed for lands of this description.

3. In reply to paragraph 3 of the Settlement Commissioner's memorandum, the Settlement Officer begs to state that he is unable to show the correct amount of past realizations derived from waees, as these have been mixed up in the past revenue collections with the well and pure Daka assessment, all of which are under Daka rubbee wheels. He has, however, the honour to transmit the accompanying statement for five dehs, which will, he thinks, answer the requirements of the Survey Commissioner.

E. L. TAVERNER, Major,  
Settlement Officer, Left Bank Districts.

*Settlement Office, Camp Tarooshah, 21st January 1867.*

*STATEMENT showing the comparative Rates of the Survey Assessment on Khurreef Lands, as aided by Waees, and of the Khurreef Lands, unaided by Waees, &c., in five Villages of the Mora Talooka.*

Name of Deh.	As per the Survey Assessment.						Khurreef.		Rubbee.		Total Rubbee & Khurreef		REMARKS.
	Khurreef aided by Waacs.			Khurreef unaided by Waacs.			Total Khurreef as per the Survey as the Assessment Rubbee.	Part average Collec- tions on the Survey Ass- the Rubbee.	Total Rubbee as per the Survey Ass- the Rubbee.	Part average Collec- tions on the Survey Ass- the Rubbee.	Total Rubbee as per the Survey Ass- the Rubbee.		
	Acres.	Rupees.	Rate per Acre.	Acres.	Rupees.	Rate per Acre.							
Kuttal.....	273	305	1 2	17	13	0 12	318	114	235	260	553	374	Whenever rubbee was cultivated in the khurreeflands under Waacs, the assessment was brought to credit under rubbee realisations.
Sudoja.....	559	640	1 3	3,000	3,110	1 0	3,750	3,024	386	560	4,136	3,584	
Wad Pagya....	673	730	1 2	989	839	0 14	1,569	992	25	146	1,594	1,138	
Amur .....	196	237	1 3	101	98	1 0	335	160	90	143	425	303	
Daro .....	1,192	1,503	1 4	3,219	3,141	1 0	4,644	3,212	2,118	1,219	6,762	4,431	

*Settlement Office, Camp Taraooshah,*

21st January 1867.

**E. L. TAVERNER, Major,  
Settlement Officer, Left Bank Districts.**

(True copies) J. MOORE,  
Assistant Commissioner in Sind.

No. 443 of 1867.

REVENUE DEPARTMENT :

*Commissioner's Office,*

*Camp Islamkote, 20th February 1867.*

The Commissioner in Sind presents compliments to the Secretary to Government, Revenue Department, and at Lieutenant Colonel Francis' request begs to forward copy of that Officer's letter No. 103, dated 31st January last, with accompaniments, in view to their being printed in continuation of the correspondence submitted to Government with the Commissioner's letter No. 246, dated 31st January 1867.\*

S. MANSFIELD.

Commissioner in Sind.

**SELECTIONS FROM THE RECORDS OF THE  
BOMBAY GOVERNMENT.**

No. CVI.—NEW SERIES.

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**AN ACCOUNT  
OF  
THE TALOOKDARS  
IN THE  
IMEDABAD ZILLAH;**

AND

**THE MEASURES ADOPTED FOR THEIR RESTORATION  
UNDER AND IN CONNECTION WITH ACT VI. OF 1862  
OF THE BOMBAY LEGISLATURE.**

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BY

**J. B. PEILE, C. S.,**  
TALOOKDAREE SETTLEMENT OFFICER.

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**Bombay:**

**PRINTED AT THE PRESS OF THE REVENUE, FINANCIAL AND GENERAL  
DEPARTMENTS OF THE SECRETARIAT.**

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**1867.**

***Price Rupees 3.***



# AN ACCOUNT

OF THE

## TALOOKDARS IN THE AHMEDABAD ZILLAH, &c.

THE estates of the Talookdars of Ahmedabad are situated in the four western Purgunnas of that district, and comprise nearly half of its total area. The following is a comparative statement of the extent of the territorial divisions of Guzerat:—

	Square Miles.
Ahmedabad Talookdars .....	1,922
„ Khalsa .....	2,492
Kaira, with Punch Mahals .....	2,937
Broach and Surat.....	2,957
	10,308

The Talookdars are thus seen to occupy about one-fifth of the most fertile province of the Presidency, and a large number of their villages are especially important from their natural fitness for the growth of cotton, which has always been the staple produce of Dhundooka.

The Talookdaree districts taken in order from north to south are—

	Area.
1. Veerunigam (Choowal)...Acres	1,67,837·17
2. Dholka .....	3,32,092·22
3. Dhundooka .....	6,11,693·12
4. Gogo .....	1,18,586·18
	<u>12,30,209·29</u>

The area of the two latter has been considerably reduced by the recent transfer of the estate of the Thakore of Bhownuggur to the province of Katheewar.

The Choowal of Veerungam is a compact group of villages in the north-east corner of that Purgunna. Its surface is a plain of light sandy soil, slightly elevated above the surrounding black soil, still in parts covered with the ancient jungle growth, and in all parts scantily wooded and enclosed. The principal produce consists in the commoner cereals. The people are simple and uncivilized.

The Dholka Purgunna is an open and level plain, sloping from north to south-west towards the salt flat and the lake called the Null. The Khalsa portion of the district on the Samburmuttee river is the most fertile. The southern part, which is exclusively Talookdaree, is salt and bleak. In the northern portion rice is largely cultivated, but with few of the artificial aids which are necessary to secure a regular yield.

Dhundooka is a district even more open and treeless than the preceding. Wheat is grown on the border of the Gulf of Cambay, cotton in the central portion, and the commoner food grains in the west. This district contains the well known cotton port of Dholera, which was ceded to Government by the Talookdars who owned it.

Gogo is a small district considerably south of the above, and bounded on the east by the Gulf of Cambay. The area is hilly and intersected by numerous streams. The hills are formed of crumbling limestone, showing traces of volcanic disturbance. The soil is calcareous and stony, but collects in the valleys in a rich loam, which is highly productive. These valleys abound with the mango, the date, and the common timber trees of Guzerat. The climate is cool at all seasons.

The owners and tenantry of these districts do not greatly vary. From remoteness, from the tenure, and the character of the proprietary class, they nowhere approach to the high cultivation of Duskroee, or Nuriad. They approximate in all respects most closely to the adjoining province of Katheewar, with which their history was identified before the period of British rule.

It is not necessary to narrate the many dynastic changes of Katheewar before A. D. 1700, which may be studied at length in the Ras Mala. In the course of them, however, some of the noblest Rajpoot houses in the peninsula formed settlements in the Talookdaree districts. The Choorasumas of Dhundooka are descended from the Hindoo dynasty of Joonaghur, which was subverted by the Moguls at the end of the fifteenth century. The Waghelas of Dholka are a remnant of the Solunkee race, who fled from Unhilwarra when that kingdom was destroyed by Allahooden in A. D. 1297. The Goels of Gogo emigrated from Marwar many centuries since, and, after pausing at Ranpoor, established themselves at Perim. The Jhalas of Dhundooka are akin to the Waghelas, and were first known as Mukwanas. The Thakurras of the Choowal are the offspring of Solunkees and Mukwanas, who intermarried with the Kolvees of the *Mhyo Kanta*.

In this same early period also happened that immigration of the Kathees (Hindoos from Sind), which attacked the Choorasumas and Goels of Central Katheewar, and established itself in their room. The Kathees now occupy Ranpoor and the west of Dhundooka.

Next follow traces of the Mahomedan rule at Ahmedabad. These are but relics scattered through the districts, and few in number. There are naturally Mussulman elements in the population of the chief towns—Dholka, Ranpoor, Dhundooka, Gogo. But besides this there are a few estates still held by officers or grantees of the Mogul, or Mahratta. Thus an estate around Ranpoor is held by Molesulams, or converted Rajpoots of the Purnar tribe, who came from Sind about A. D. 1450, and were settled at Ranpoor by Muhmud Bigara. A branch of this house took service under the Mogul, and formed a large estate at Dholka. This branch is now represented by Sher Meia. There were later at Dholka in the service of the Mahrattas Mussulman Officers from Delhi of the Mena and Rehen clans. These also formed estates, and all, Purnars and Mussulmans, are called Kusbatees or men of the Kusba, or chief town, as opposed to the rural Chiefs.

There are Kusbatees (so called) in Veerungam a little different from these. They state that they came from Khorassan



to Puttun, and received a gift of villages from the Waghela kings. Their villages were taken from them under the Mahratta rule, and restored as on farm. They formerly had seventeen villages, but as they were unable to manage them the Collector took away eight and made them Khalsa, leaving the rest on a Talookdaree tenure.

Beneath is an abstract of these elements of population in each district:—

		Villages.
VEERUMGAM....	Thakurras.....	69
	Jhalas .....	4
	Molesulams .....	2
	Kusbatces.....	9
DHOLKA .....	Waghelas .....	69
	Kusbatees.....	21
	Rawuls .....	1
	Jhalas .....	1
DHUNDOOKA ....	Choorasumas .....	49 $\frac{1}{4}$
	Charuns .....	4 $\frac{2}{3}$
	Jhalas .....	45 $\frac{1}{6}$
	Kathees .....	17 $\frac{1}{2}$
	Gosaces.....	5
	Goels.....	1
	Mussulman.....	4 $\frac{1}{2}$
	Purmar Molesulams .....	16 $\frac{1}{3}$
Gogo .....	Waghelas .....	1
	Goels.....	54
	Bharote.....	2

These mixed elements are significant of the position and history of the districts.

The estates of the Ahmedabad Talookdars may be defined geographically as the border land between Guzerat proper and the peninsula of Katheewar, and historically as the coast where the debris of the old Rajpoot principalities of that peninsula was worn

and beaten by the successive waves of Mogul and Mahratta invasion. But they are part of Kathcewar, rather than of Guzerat. Their proprietors are Kathcewar Chiefs. Their communities have the same elements. There are Choorasumas in Oond, and Choorasumas in Dhundooka; Jhalas in Drangadra, and Jhalas in Dhundooka; Goels in Palitana, and Goels in Gogo Bara. In the part of the British district adjoining Jhalawar the Talookdars are Jhalas; in that adjoining Kathcewar, Kathces; in that adjoining Goelwar, Goels; and in some instances there are Jhalas, Kathces and Goels, who hold villages both under Rajkote and under Ahmedabad. The States of Lathee and Wullah have villages in Gogo; those of Limree, Wudwan, Wankaneer, have villages in Dhundooka; that of Kutosun has villages in the Choowal.

Mr. Forbes thus describes the Mogul *method* of ruling this border country and Kathcewar:—

“During the government of Guzerat by the Sultans (A. D. 1400—1572), and afterwards by the imperial Soubahdars stationed at Ahmedabad (A. D. 1572—1755), the Mahomedan authority was supported by garrisons placed in fortified positions throughout the country, which ensured to some extent the regular collection of the tributary revenue, and rendered expeditions for its enforcement, except in special cases, unnecessary. These posts, however, were gradually withdrawn or driven out, and amid the frequent scenes of anarchy which were witnessed during the last days of the Mogul Government not a few were the result of endeavours to collect the revenue due from the tributaries by *annual* military expeditions. This course, which with the Mahomedans was compulsory and exceptional, was with their successors congenial and regular.”

In the better days of Mogul rule Todur Mul, the Minister of Akbar, divided all the districts of Guzerat under different provinces, or Sircars.\* Of all the Talookdaree districts Gogo alone appears in this division under the Sircar of Soreth, or Kathcewar. Dholka and Dhundooka are numbered among the better tamed

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\* See the *Ayeen Akbarea*.

districts of the Ahmedabad Sircar, and so is Veerungam under the name of Chalabarah, or Jhalawar. The port of Gogo (the Ostia of Cambay) was also under the latter Sircar.

The Mahrattas expressed the distinction between the two Sircars in new and more significant terms. They called Katheewar (where they could not appear without an armed force) the Moolukgiree country, while the other districts were called Rastee, or pacific. About A. D. 1760 they transferred the district of Gogo to the Rastee districts, and after this none of the Talookdaree districts remained in the Moolukgiree country. They were not, therefore, of those which maintained perfect political independence under former rules. Yet it would not appear that the peaceable districts were really much quieter than the Moolukgiree; for Colonel Walker says of the Peshwa's revenue that "the deficiency arose from the inability of the Komavisdars to maintain a sufficient body of troops, which are not only necessary to go on Moolukgiree, but to make the ordinary collections in Guzerat." The difference, however, appears to have been that in the Moolukgiree country there were no permanent Revenue Officers at all; whereas in the copy of the Deed passed by the Peshwa to the Gaekwar in granting him the lease of Ahmedabad in A. D. 1804 the establishment for each of the peaceable districts is specified among the charges. Thus for Gogo—

Mujmoodar.....	Rs. 200
Treasurer .....	,, 150
Furnavees .....	,, 400

On the other hand, the only charges for Katheewar in the above Deed are the expenses of Military expeditions. Again, the Munotedar system is not found in use in the Rastee districts, but in the Moolukgiree expeditions "ready money was seldom obtained, but securities from the bankers, with whom all the villages had dealings, were preferable." In some of the Katheewar accounts there are no names of districts, but only of the Manotedar and Bhats who gave security, with the names of the Commanders of the Troops.

The period of the Mogul Soubhahdars ended with the death

of Mominkhan in A. D. 1743. He had shared the Guzerat revenues with Damajee Gaekwar for six years previous. When Damajee was captured by the Peshwa in the Deccan (1751) he had to surrender half his revenues to the latter, and conjointly they expelled from Ahmedabad Juwan Murdkhan Babee, the last supporter of the Mogul power (A. D. 1755). In the partition of the revenues, Dhundooka, Gogo and Veerungam, fell to the Peshwa, and Dholka to the Gaekwar.

Not only all that is now called Veerungam, but also all the Katheewar province of Jhalawar, and Ranpoor (now attached to Dhundooka), were then included in that district. The following is a list of the districts then in Veerungam, extracted from a paper obtained from the house of an hereditary officer of the late Government at Ahmedabad :—

1. Havelee Veerungam.
2. Limree.
3. Wankanee.
4. Choorā.
5. Wudwan.
6. Jhunjoowarra.
7. Hulwad.
8. Ranpoor.
9. Chooval (41 villages).
10. Dusura.
11. Bujana.
12. Secta Lukter.
13. Patree.

In 1799 the Peshwa farmed his Ahmedabad revenues, including the Katheewar tribute, for five years to Govindrow Gaekwar, and the latter appears to have found it convenient to transfer all the above, except Havelee Veerungam (or the Home district) and Ranpoor, to Moolukgiree management. In a memorandum by Trimbukrao Sudasev, Mujmoodar of Veerungam, it is stated—

“ Sumwut 1856 (A. D. 1799—1800)  
the City of Ahmedabad was taken  
from Seelookur\* by the Gaekwar.

\* Aboo Seelookur, the Peshwa's  
Soubhahdar.

From that day the Moolukgiree of Jhalawar has been separated

from Veerungam and put under Moolukgiree management." It is thus seen that the Talookdars' estates were much akin to the Moolukgiree country, and yet distinguished from it. In the half century before British rule Gogo and Ranpoor were removed from Moolukgiree management, while part of Veerungam was transferred to it; and the Choowal, although now treated like Dholka or Dhundooka, was exhibited as part of Kathcewar in a Mahratta State paper as late as A. D. 1814. (Bombay Treaties, page 552).

It is, of course, familiar to all readers that the Moolukgiree country has been treated as foreign territory, and the tribute due from it fixed in perpetuity, while the Talookdars' estates have fallen under British jurisdiction with a rapidly increasing land tax. Yet no one who is familiar with both sides of the border can hesitate to decide that the advantage in peace and justice, and the other best elements of prosperity, is with the latter. The most powerful Chiefs and their advisers are the only gainers by an independence which has never so far been found to co-exist with tolerable security to the life and property of their subjects.

The Thakore of Bhownuggur was the immediate cause of the first acquisition in these parts of territory by the British. In the last years of the eighteenth century he was intriguing to get a footing in the Dhundooka estate of Dholera, and thereby drove the Grassias in 1798 to seek the protection of the British Government, who were then holding the balance (with occasional recourse to the sword) between the Peshwa and the Gaekwar in Guzerat.

In February 1802 the Bombay Government deputed Mr. Miguel de Souza, a Portuguese merchant, and their zealous, if not highly educated, Agent, to inspect this little cession. He says—"It immediately occurred to me that as these villages formed part of the Purgunnas of Dhundooka and Ranpoor

Mr. de Souza to Government, September 13, 1805, paragraph 6.

I should not be able to bring my views respecting that place (Dholera) completely to bear, nor to establish our trade, and be enabled to introduce it into Kathcewar and Jhallawar, without having some control over those Purgunnas; and he accordingly moved

the Governor of Bombay to request the Resident at Poona to obtain for him from the Peshwa the farm of Dhundooka, Ranpoor and Gogo Barah. The Resident promised to watch for an opportunity to do so, and Mr. de Souza secured the promise of the farm from Raghoba at Baroda.

Of the cession of Dholera the Governor, Mr. Duncan, says—

To the Governor General, June 11th, 1802.

\* Query, Katheowar?

“In the view of improving our commercial, and eventually our political, intercourse with the peninsula of Guzerat,\* I have accepted the offer of Dholera, the Grassia proprietors

of which have been pressing me for the last four years to accept of this spot, their object in which has been the procuring protection for themselves against the depredations of their neighbours.” And he continues that this “territory, situated under the Purgunnah of Dhundooka, is subject to a fixed Khundunee (tribute) to the Peshwa, who does not, however, appear to exert any interference in the internal management.” The cession was sanctioned by the Gaekwar (then the Peshwa’s farmer), but not by the Peshwa himself. The Gaekwar issued a Purwana to the Grassias, in which he

Bombay Treaties, page 151.

stipulates—“The Peshwa’s Khundunee for the Purgunna of Dhundooka and the Sircar’s usual Jummaabundy to be regularly paid. The Honorable Company shall have the government of those villages, inhabit and cultivate them, and shall take upon themselves the management of the port, and hoist their flag.”\* .

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\* This seems a strange proceeding, as the district was not Moolukgiree, but, to show that proportionally strange things were done in the Moolukgiree country, the case of Mowa, Wagnuggur, and Tulaja in 1771 may be noted. These were ports on the coast of the Gaekwar’s tributary district of Goelwar. A British expedition sailed against them from Surat, and, in co-operation with the Thakore of Bhownuggur, drove out the pirates who held them. In the record of this transaction the ports are called

Bombay Treaties, page 99.

“our conquests,” and a fear is expressed “lest they fall into the hands of the Mahrattas,” to avoid which one of them was sold to the Nawab of Cambay. Thus it seems that the British Government did not hesitate to make conquests in the Moolukgiree, and accept cessions by petty Chiefs in the other districts of Guzerat under the nominal rule of the Mahrattas.

Before the end of A.D. 1802 the treaty of Bassein was under discussion. On December 3rd, 1802, the Resident of Baroda was directed to prepare and send down, as soon as possible, an authentic statement of the Peshwa's Purgunnas, with their full annual value, under the lease to the Gaekwar. A copy of his answer was transmitted to Colonel Close, the Resident at Poona, and from it he prepared in succession (to meet objections raised by the Peshwa) three distinct schedules of territories to be ceded. But Dhundooka, with Choora, Raupoor and Gogo, are included in all of them, and in a memorandum dated December 21st the Governor writes—“Our having Petlad and Dhundooka will be of much political convenience, the former adjoining and immediately connected with Cambay and Dholka, and the other as including the two ports of Dholera and Gogo.”

Next year Colonel Walker, Resident at Baroda, visited the new cessions, and reported that the Grassias were “nearly on the footing of Moolukgiree tributaries, and required an annual armament to obtain payment of their Jumma,” that they owed no obedience to the Government, and that as they paid tribute to the Gaekwar and Joonaghur Nuwab, as well as the Peshwa, it was not “an easy matter to point out the paramount power.”

Colonel Walker distinctly says that as the Mahrattas had never interfered with the jurisdictions of the Grassias, they could not be at once considered subject to British jurisdiction; and he thought they could only come under it by their own voluntary Act. “An attempt to give them our laws against their will would not, perhaps, be just, and would not answer the purpose.” He proposed to obtain from each individual Grassia a cession of jurisdiction like that of Dholera—“Our first en-

Compare the Highlander in the seventeenth and eighteenth centuries—Macaulay, ch. XIII. “Many miniature courts, in each of which a petty prince, attended by guards, by armour-bearers, by musicians, by a hereditary orator, by a hereditary poet laureate, kept a rude State, dispensed a rude justice, waged wars, and concluded treaties.”

deavour should be bent to obtain from them acknowledgments in writing expressive of their submission as subjects to the English Government, and its laws and regulations. It is usual with

Grassias to give writings of the kind, and formally to transfer their rights in exchange for protection. Dholera is an example of this."

So tedious a method of assimilation was not approved. The administration of this early period is described in Regulation II. of 1805: "The two latter divisions (Dhundooka and Gogo) for the first two years remained in charge of the Resident of Baroda, with European Assistants and Native Officers, who during that period administered the police and justice of the country in ordinary cases (none of great magnitude, or of a capital nature, being decided) according to the local usages and the principles of equity. Meanwhile information was collected and preliminary steps pursued."

"When regular Collectors were appointed," Mr. Mountstuart Elphinstone continues, "the same system was for a long time pursued." It was now applied to Dholka also, which district had been ceded by the Gaekwar to defray the charges of a subsidy by a Sunnud dated June 6th, 1802, but arranged to take effect from A. D. 1803-1. The Thakore of Bhowmuggur, who was at first specially exempted from British jurisdiction in his estate in Dhundooka and Gogo, forfeited the privilege by misconduct in 1813. And in 1815 the Honorable

Macaulay, ch. VIII—"The ancient Gaelic polity had been found incompatible with the authority of law, had obstructed the progress of civilization."

Court take occasion in a despatch to note their approval of the assertion of sovereign rights (of which many had previously doubted the existence) throughout the whole of the cessions by the Treaty of Bassein to the west of the Gulf of Cambay. In 1819 the Honorable Court further resolved that the right of Government to increase the tribute payable by the Grassias naturally followed from the decision previously passed on the question of sovereignty. "The effect of that decision was to place these classes on the same footing as other subjects, and consequently to render their property liable to a proportionate share of the public burden."

In 1817, by the double cession on the Peshwa's part of the lordship and the Gaekwar's part of the tenancy of the farm of



Ahmedabad, Veerungam, with the remaining Talookdaree estates of the Choowal attached, became a British district.

Now between this time and 1821 it appears that the jurisdiction of our courts took firmer hold on these districts. The Thakore of Kôt was sent to prison for neglecting a summons, and the Chief of Patree was incarcerated for debt. The Collectors also were over-zealous. On the strength of the Honorable Court's decision, and with no data of production, in three years they made a vast addition to the Jumma. They also appointed Mookhees, and in Dholka even 'Tulatees to the Talookdars' villages, and they altered the principle of the Dholka payments from a tribute paid to Government to a certain proportion of the produce left to the Grassias.

The Honorable M Elphinstone saw and pitied. He had the Tulatees withdrawn, and lowered the rate of tribute or Jumma. He deprecated the extreme action of the Adawlut, and suggested some checks upon it. Finally, he proposed settlements of some length, instead of the yearly revision of Jumma.

As there is very little in the nature of authoritative decisions on record for many subsequent years, it is worth while to consider at this point what the condition of the Grassias ought to have been found to be when it again attracted the special attention of Government.

The question of jurisdiction had been settled, and so had that of increasing the tribute or Jumma. But a principle had been laid down about the latter. The Honorable Court decided that the Grassias were not aliens contributing a fixed subsidy to a foreign power, but subjects whose property was chargeable with a share of the cost of Government in proportion to that borne by other classes. If so, it is natural to ask how the mercantile classes were charged with their share now that the Income Tax is discontinued, and why the Grassias should have been charged with Income Tax when they paid a property tax already. Although,

however, the subsequent practice unquestionably goes much beyond the principle laid down by the Honorable Court, still it may be fairly put that the Grassias always had paid a property tax under the Mogul and Mahratta, that the amount of it was never fixed, and that, although the increase under British rule has been great, it is not out of proportion to the increased value of the property, which has resulted from good government. The Grassias, in short, do not bear an inordinate share of the public charges, although they may be entitled to complain that certain classes do not bear any share at all.

But it is most important to mark that the Honorable Court assert no other claim upon the landed property of the Grassias than the common liability to a quota of the cost of Government. The excellent authority of Colonel Walker and Mr. Elphinstone establishes that up to 1821 this view was not only correct, but universally admitted, and no special note of it is necessary but for the strange inconsistency of subsequent opinions.

It had been settled then that the Talookdars were proprietors paying their share in the public burden by a tax on the value of their land. They were possessed of the common right of letting their lands at pleasure, and their ryots were their tenants-at-will. They were consulted on the appointment of their village police officers, and Government did not assert any right of entry upon their estates to measure or assess their lands. Estimates of the value of the standing crops were made by the District Officers, but Mr. Elphinstone's rule (that the Jumma should only be increased on an increase of the Grassia's means) was commonly respected, and, as prices fell continuously at this time for more than a whole generation, the increases of Jumma were not considerable. The Jumma was often unequal, but this was incidental to the method of fixing it without certain data of the value of the property. Altogether with the practice of the period between 1821 and 1860 the Talookdars have not much reason to quarrel. But they were in imminent and growing danger from a theory.

It is not easy to trace the sources of an erroneous theory which gathered volume from neglect as much as anything else. It

seems that in 1829 Government pointed out that the Kusbatee Bapoo Meea was, as Colonel Walker had explained in A. D. 1805,

Reports, page 39.

not a proprietor. Being embarrassed by debt and unable to extricate his affairs, Bapoo Meia was causing infinite trouble, and on referring to his history it appeared that he had no such claims as his Rajpoot neighbours to the protection of Government. "His family have held, not as proprietors, but by sufferance of Government, lands the whole history of which (and it does not commence at a very remote period) shows they are resumable at the will of the sovereign." To refer to this as an authoritative decision on the rights of Grassias is a manifest blunder, but it has been frequently so referred to, and probably with a feeling of satisfaction, for the Grassias shortly came to be viewed with little favour in the eyes of the Zillah officers, and not perhaps without reason.

The Grassias are indeed not punctual, nor provident, payers of revenue. The system in force called for little intercourse with them, except in the way of attachments for default of Jumma. Years of famine plunged them into debt. Prices fell steadily. The Grassias spent largely as usual on weddings and funerals. They had long been a privileged class, against whom creditors had no remedy. Of the kind of obligation incurred by signing bonds on stamped paper they had had no experience. A few sharp visitations of the Civil process intimidated them into needless pliability. When summoned to the courts they either ignored the summons to their own discomfiture, or compromised matters with their creditor at a monstrous sacrifice. Money-lenders collected and became the terror of the district. Bond was heaped upon bond until the original transactions were lost in a maze of chicanery. Then came the recklessness of men who knew nothing of their own affairs, except that they were inextricably involved.

The Revenue Survey system was now (A. D. 1850-60) opening in other districts a new vista of prosperity and well-being to the ryot. If the Talookdaree ryots could be found entitled to a like entitlement, all would be well. If the Grassia could be shown to be in some sense a middleman or farmer, a proprietary right

might be inferred to be latent in the ryot. There were middlemen Talookdars in the North-West, and why not in Guzerat? It was forgotten that the name of "Talookdar" was first applied in Guzerat by the British themselves. It was not thought worth while to enquire as to precedent, or to question the ryots themselves, who consistently declared themselves tenants-at-will. It was overlooked that no trace of a contract, or other formation of a farmer's tenure, could be discovered. But it could not be denied that the Grassias held under leases, and when these leases had been submitted to the Law Officers of Government their opinion seemed to settle the question.

These formidable leases had begun in a very simple form. Grassias had always been used to hand in annual agreements for their Jumma. In 1821, when Mr. Elphinstone introduced the system of settlements for seven or more years, agreements were prepared for seven or more years. But these agreements were convenient places for embodying stipulations with the Grassias, and the original simple form was gradually expanded into a formidable instrument, which a Grassia could not execute without signing away many of his rights.

In course of time one of these agreements with ten or twelve conditional clauses was submitted to the Remembrancer for Legal Affairs. He was not told that the Grassias had immemorial possession when the "lease" was tendered, nor that it was devised and agreed to by the tendering party only. He replied that "the

Legal Remembrancer to Government, No. 124 of 1855.

legal rights of Talookdars are defined by their leases, the provisions of which are so stringent as to make the Talookdar little better than a tenant-at-will of Government." From this moment all the peculiar rights of the Talookdars were theoretically abolished, and so they continued as long as Government consented to benefit by their own tort.

But in the quarters most practically concerned quite a different view was acted on. The creditors were now hastening to close upon the Grassias and have done with them. They called upon the civil courts to sell the Talookdars' landed property in

satisfaction of their decrees, and the courts held that it might be sold. The Collector, strange to say, made no opposition. Not only fields but whole villages were put up for auction, and knocked down for a trifle to the creditors or their agents. And yet

\* Under Act VIII. of 1859—213. when creditors applied to the Collector's Registers for an extract of the revenue of a Talookdar's estate and his interest therein, the

Circular Order dated June 2, 1860. Mamlutdars were instructed to reply that the management merely was in the Talookdar's hands as long as it should be the pleasure of Government to continue it, but that Government were the absolute lords thereof.\*

A crisis of confusion was thus rapidly approaching. The decision of the executive was in conflict with the practice of the courts. Government had laid down rules on the "Middleman" theory, the enforcing of which might have caused a revolution.

\* At Bhownuggur. An occasion came for testing them, and they were superseded.\* It was assumed that the ryots had proprietary rights, and the ryots denied it. If the Grassias should contest the question of ownership with Government in the civil courts and defeat them, the sales would be more numerous than ever, but this was most inexpedient, for the prices got were nominal, and an attempt by the purchaser

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\* The following are some of the sales of villages which were held by order of the courts shortly before the adoption of remedial measures :—

Village.	Date of Sale.	Price obtained/1	Area in Acres.
		Rs.	
Unialee Katheenee ...	September 30, 1861.	2,000	2,547 14
Hurnia .....	November 1862 ...	5,200	2,087 22
Ookurdee .....	October 1862 .....	256	5,030 22
Oogrojpura .....			
Manpura .....			
Raneepura .....			
Sindatpura, 1/4ths .....	September 1862 ...	231	6,013 33
....., 1/4ths .....			
....., 1/4ths .....			
Nudisala, 1/2 .....	September 1861 ...	2,005	662 39

to take possession would have resulted in a breach of the peace. The value of the estates, and the bearing of the Jumma on them, was quite uncertain. The amount of the encumbrances was equally uncertain, but known to be enormous. But on what were they secured? If the Talookdars had signed the leases presented to them, and thereby accepted the conditions, they were in fact lease-holders, and the hold of the creditors upon their landed estates was very nearly worthless.

It was suggested\* that Regulation XXV. of 1827 would meet the emergency. But could it be

\* By the Government of India.

applied to lease-holders? It was competent to Government no doubt by declaration to admit the proprietary right, but if this was followed by a general pressure of the creditors of many hundred estates how was provision to be made for the management of all these, in the words of the Law, "by the Officers of Government in the Revenue Department." If the Regulation were applied in a few cases, and the creditors combined in abstaining from stating their claims, there was no power to compel them to come forward, and the proceedings might be hopelessly protracted. Again, if the creditors had lent their money on the security of the profits of a lease, what was the value of their claims if the leasehold should be enlarged into full proprietorship? Was their security improved or abolished?

An enactment was devised, therefore, in the Legislative Council of Bombay, which should begin by reciting the facts as to the leasehold, and, after providing for a settlement of present liabilities, should make a reinvestment of proprietary rights its final provision. It was so framed as to leave creditors no option in consenting to an immediate and definite settlement, but full powers were left to the Governor in Council to make the settlement as liberal as circumstances might allow. The method of making awards on the claims of creditors was fixed by Rules appended to the Act, which were so calculated as to award the whole claim wherever it was fair and reasonable, and to cut off the excess from such as were extortionate. If the circumstances of the Talookdar should not be such as to call for any abatement, or if the loan were secured on freehold,\*

\* Wanta—See appended memorandum.

not on leasehold property, power was given to the Governor in Council to award all or any claim to be satisfied according to the terms of the deed or decree.

This Act was No. VI. of 1862 of the Bombay Legislature. It was put into force in the beginning of 1863, and applied in that year to 55 villages, principally of Dhundooka and Dholka, against which 1,069 claims were preferred to the aggregate amount of Rupees 12,76,559, and Rupees 7,00,411 awarded. In 1864 the Act was put into force in 116½ villages, against which 653 claims were preferred to the aggregate amount of Rupees 9,71,830, and Rupees 5,22,715 awarded. The debts of two considerable Talookdars, besides the above, have been settled by arbitration, the amount claimed being Rupees 2,60,130, and the award Rupees 1,69,656. The total of debt disposed of is therefore—

By Act VI..... 22,48,389

By Arbitration..... 2,60,130

25,08,519

or over a quarter of a million sterling. There are now, probably, very few estates remaining to which the Act need be applied. It is not meant that none of the Talookdars of the remaining villages are in debt. But they are safe from persecution, and in a good position to compound with their creditors. They have had funds provided by the wonderful prices of produce in 1862 and 1863, and they are required to purge themselves from debt before Government emancipate them from the leasehold.

The method of recovering these awards was arranged with due regard to the self-respect of the Talookdars, and to economy and despatch. It was not feasible to manage some hundreds of square miles direct, and therefore the rental was estimated, and a fair sum fixed yearly for the Talookdar to pay, the management not being taken from him, except in case of misconduct. It was also suggested by the Government of India, in order to mitigate the stringency of the Act, that the awards should be paid at once by an advance from the Treasury where the estate was not too heavily encumbered. Advances were sanctioned up to the limit

of 4½ lacs, and it was ruled (under Section VI.) that they should be chargeable, until recovered, with interest at 5 per cent. per annum.

Up to the 1st June 1865, on which day the yearly accounts are made up, Rupees 3,03,157 had been paid off by advances, and Rupees 8,64,640 from collections, making a total of Rupees 6,67,797 paid off out of Rupees 11,23,126, the total award. Of the advances Rupees 30,574 had been recovered up to the same date.

It is a singular feature of this settlement that scarcely had the Act become law when the prices of produce, which had for some time been rising, sprang up at once to an abnormal height in consequence of the demand for cotton. The old price of a

maund\* of Kala (uncleaned cotton)  
was 1½ Rupees, but in 1863 many

\* 40 lbs.  
of the Dhundooka Talookdars got Rupees 6. Food grains were sold in some places at Rupees 3 per maund. As the Jumma was not increased, and the Talookdar generally grows enough of food produce for his own supply, and spends little on other commodities, the rise in prices was very nearly all profit to him, and would have so continued for many years if the high rates had been maintained. But the brief gleam of incredible prosperity was very useful for the purposes of Act VI., as may be easily believed from the large amount of debt already paid off. Yet, from experience with Talookdars not brought under the Act until after the season of 1863, it is proved that this great resource would have been wasted and not applied to the liquidation of debt if it had not been directed aright by the controlling powers of the Act, to which the creditors ought to feel greatly obliged for compelling numbers of unwilling Talookdars to pay their debts without any cost for legal proceedings.

Another happy effect was that Government were conscientiously enabled to augment the awards to an extent which could never have been expected, and which left most of the creditors nothing to desire. Of 1277 claims it was decided to pay off 392 in full, and of these 247 had been paid off before June 1865. And thus those provisions of the Act which had fallen under much



unfavorable criticism before it was enforced were rectified by the felicitous accident of after events, while the result, which was always admitted to be desirable, and even necessary, at any sacrifice, has been achieved without the sacrifice of any thing. The estates have been disencumbered, and the Talookdars are still in possession of them.

Before the Act was put into force the Government of Bombay

To the Revenue Commissioner N. D. No. 4449 of 1862. remarked—"In whatever manner the settlement (of debt) is effected, the first and most important measure to be adopted will be to ascertain the capabilities of each estate; and as there are no correct accounts on the records of Government of the value of the estates, this information has yet to be acquired." The first step was "a survey of each property, and a classification of its productive powers in accordance with the principles of the survey." And next "the several estates having been surveyed and classified, the next measure will be to settle on equitable terms the amount to be paid by the Talookdars during the term of settlement as the Government Jumma. The settlement now to be made should not be made to depend on the amount of former payments, but on calculations based on the productive power of the estates, as ascertained by the survey classification and assessment." These instructions introduced quite a new principle into the assessment of the Jumma, and entailed an acquaintance with the internal economy of Talookdars' villages which had never before been attempted.

Indeed, a great part of these districts was virgin soil to a Revenue Survey. Even the Minister of Akber only surveyed Dholka, the nearest of the four to Ahmedabad. The "old survey" (1820—24) laid down the boundaries of the estates in Dholka and Verumgam. Those in Dhundooka and Gogo had never been visited by any survey, except some few which had fallen under attachment after the commencement of the new survey in the adjoining districts.

It will be remembered that Government did not formerly assert any right of entry on these estates for the purposes of survey

and assessment, and probably had no legal right to such entry in the face of a long prescription until the enactment of Rule 9 under Act VI. of 1862 and Clause 4 of Act I. of 1865. It is important to note this, because it marks the fact that the Jumma was not previously assessed upon the land, but upon the rental of the land.

The proprietor of this rental is the Talookdar, or family of Talookdars. Only those estates are now held by a single Talookdar, which form the domain of a Gadce, or Chieftainship. The

Kôt.  
Gangur.  
Ootelia.  
Koowar.

Gamph.  
Bhunkora.  
Mukhiow.

Gadees in the four districts are so few that they may be emunerated in the margin. The other estates are the property of the younger

sons and sons' sons (Bhayat) of the incumbents of these Gadees. A village given from a Gadce to a younger son reverts to the Gadce if the younger son dies childless. But if he has five sons the village is divided at his death into five parts, his eldest son having with the Jhalas a double share, and with the Waghelas and

The Bhayat grows so fast in these peaceful times that the reversionary right of the Gadce is merely nominal, and little thought of.

Choorasumas  $1\frac{1}{2}$  shares. The Kathees divide equally, and females also inherit. The Choowal Thakurras have kept the whole estate in

common, the strongest holding shares in the produce, and the weaker being put off with small Jivaces, or subsistence lands, to the promotion of perpetual quarreling. But the sharers are so numerous, and their influence so divided and uncertain, that there is nowhere among them any thing that can be called a Gadce, except perhaps at Bhunkora.

The Chief of Kutosun in the Mhyee Kanta, and the Chiefs of Limree, Wudwan, Wankaneer, Wullah and Lathee, in Katheewar, have estates in the Talookdaree districts; so also had the Thakore of Bhownuggur until the recent transfer to Katheewar. The

Macaulay, chapter XIII.—MacCollum More after MacCollum More, had with unwearied, unscrupulous, and unrelenting ambition, annexed mountain after mountain, and island after island, to the original domains of his house.

greater part of the estates of Bhownuggur and Limree are not their original property, but villages belonging to Choorasumas, Kathees, or their own Bhayat, made over to them for

protection or loans. In the former case (protection) the Durbars are probably safe under the statute of limitations, but where sixty years have not yet expired since a mortgage was made, or acknowledged in writing, the original owners may yet recover their villages. The Bhownuggur Durbar puts forward Section V. of Regulation V. of 1827, but that section (if still in force?) only protects lands acquired before the treaty of Bassein, and still held under a title conferring a *bona fide* right to property, and not, therefore, lands held on mortgage. It seems clear that Act VI. may be applied to estates proved to be held on mortgage made, or duly acknowledged, less than sixty years since, so as to restore them to the former proprietors after admitting any money claims proved against them. But clear proof of a mortgage is required to distinguish these from cessions for protection, and clear proof is seldom to be had. The Grassias hardly ever kept counterparts of Deeds, and the originals are with those most concerned to conceal them. The relief which it is possible to give to original holders (Mool Gametees) is, therefore, small. This would not much matter if they were safe in the enjoyment of the lands and fourth share, which they invariably reserved when mortgaging their villages. Unhappily, their position has invited aggression, and they have often been the victims of painful injustice, for which a remedy is to be had only in the civil courts, and for this they have not the means.

The community of a Talookdar's village consists of the Talookdar or Talookdars (commonly called the Durbar): his attendants, who are commonly Rajpoots of the Choowan, Rathor, Purnar, or other such clan; one or two shopkeepers, with whom the Talookdar has an account for petty supplies—perhaps a Gosace or Charun; the Mookhee, whom the Talookdar nominates under approval; the Havildar, who helps the Mookhee, and looks after the crops in the grain-yard; the village Barber, Puggce, and others; and the cultivators, of whom a few are Koonbees, and the rest Kolees, Burwars, Aheers, and such like. There are no hereditary village officers, and the name even of Patel is unknown, except in Dholka. The Durbar is highly regarded even in its eccentricities and follies, and no one holds any station in the village but by its pleasure. The summary jurisdiction of the eighteenth century has not been entirely

~~forgotten.~~ It is more than suspected that some of the Gadess have occasionally revived the feudal powers which the laws have superseded, and it seems a sound policy which has lately invested some of the best qualified Thakores with magisterial powers, and a personal interest in upholding the law.

The village site is, like the rest of the lands, the property of the Durbar, and the wooden frames of the buildings (which are probably cut on the village lands) are also the perquisite of the Durbar when the tenant leaves the village. There is often an exception to this rule in favor of Brahmins, &c. It savours of the time when all the houses were of mud, and the wood-work only valuable. Certain cesses of the nature of ground rents were abolished by Act XIX. of 1844, one of the most indiscriminating Laws ever passed. It would be very expedient to revive the ground-rents to form a fund for village municipal purposes.

All the village lands pay rent to the Talookdar, except such as he, or his ancestors, may have given away. Of the latter class some part has been given absolutely to Temples, Brahmins, or Charuns, and the rest is enjoyed by the village servants as their wages, and often pays a cess or quit-rent. Of the rent-paying (Durbaree) lands the Talookdars mostly keep a portion in their own hands, cultivating it by their house-servants (Ghurkhed). The rest they let out to their tenantry, whose tenure is not secured by leases, or written conditions, but presumably is from year to year. Tenants sometimes give a bonus to get the occupation of a field, but this is an irregular proceeding incidental to large estates, and the money, probably, goes into a Karbharee's pocket.

The rents are everywhere, except in a few rare instances, paid in kind. It is more accurate to say that the Grassia goes and divides out the produce according to the custom of the village (Dharo). But there are different methods of doing this. In wheat and other food grains the common way is to make an estimate of the standing crop by cutting and weighing a few rows at fixed intervals, and so getting an average (Dhal). In cotton the more favored plan is to bring the produce to the village grain-yard, and divide it there (Mankhul).

The small variations of the Dharo are countless, but a general idea may be given of it. First, the cultivator is allowed for seeds in wheat  $\frac{1}{2}$ \* a maund per beegha, and in gram  $\frac{1}{4}$  of a maund.

\*  $1\frac{1}{4}$  maund per acre.

This taken, the cultivator gets next grain equal to the pay of the extra labourers engaged for the harvest at the current rate; and thirdly, a cess called Purtharo (about 5 per cent. of the produce) to cover the wear and tear of stock. The Durbar has a similar cess called Mapoo (from  $2\frac{1}{2}$  to 5 per cent. of the produce) for interest on its capital expenditure. Lastly, the village servants, temples, &c., have their small perquisites, which amount to about 5 per cent. of the produce. After these deductions, the produce is commonly divided to landlord and tenant in equal shares. In villages where the landlord takes less than half he generally makes up by a Plough Tax (Santhee Vero), varying from 10 to 20 Rupees per plough.

The tenant has the further advantage that if he raises garden produce, or even if he manures his field, the Talookdar allows for his extra outlay by taking one-fourth, or even one-eighth, of the produce, instead of half. He is also allowed the grass which grows on the side of his field, and in some villages grass from the Ber, gratis, and he has all the straw of his grain crop. If he takes up new ground he pays nothing or a quit-rent only for three years.

Of the expenses, therefore, the Talookdar alone sustains the Jumma (taxes), the Mookhee's pay (police), and all remuneration of village servants given in the shape of land. The tenant alone sustains nothing. Conjointly landlord and tenant defray from the returns (1) seed, (2) extra labor, (3) the part of the remuneration of the village servants paid in kind, (4) charities to temples, &c. The tenant finds his own implements and cattle, but the interest he gets on his capital (Purtharo) appears generally to be more than the Grassia takes on his (Mapoo). In case of such a crop as sugar-cane he gets an allowance for all the extra outlay, and a larger share of the produce.

The crops (except the common grains kept for food) are sold to travelling agents who visit the villages at the harvest season. The cost of removal falls on the buyer, but is duly considered in the price offered. The tenant is saved the trouble and anxiety of storing and selling more than his own share of the produce; he cannot be pressed for rent before the produce is realised, nor for a cash instalment before he has got his money from the buyer.

Such appear to be the principal advantages of the tenant under the Bhagbuttae system. It is very far from illiberal, and the abuses which have made it unpopular are not its inseparable attendants. The Talookdar, however, and all private landlords, have the misfortune to compete with a landlord in the State, who is more liberal than they can afford to be with justice to themselves. The survey rental is not a full rent, *as is well known*; and yet the Talookdars have managed to retain their tenants in spite of the competition of the Khalsa villages. The tenants, no doubt, like a system under which they have no connection with Government Officers. They are not, however, in a position to accumulate capital, and a poor district has no artificial resources to meet the caprice of the seasons. Thus one or two bad years bring the tenantry very low, and the plea that they have to pay little when they get little, and that their rent adjusts itself to a bad season, is not conclusive that they would not prosper better if their rents were fixed (whether in money or kind) for terms of years. But the tenants are as slow to believe this as the landlords, and it is hard to expect either of them to be eager after improvements which are still coldly regarded by English agriculturists.

It would, indeed, be a far greater boon to both landlords and tenants to secure the expenditure of a considerable capital on permanent improvements in these districts. The Grassias might do it, but it is hopeless to try to open their eyes to the fact. The districts suffer from drought, and the water is scarce, (1) because little falls, and (2) because that little is not secured. A systematic planting of trees would go far to improve the rain-fall, and the construction of locks and bunds would give a uniform value to villages which may now absolutely produce anything between

2,000 and 20,000 Rupees in any given year, according to the quality of the rain-fall. Much may be done by a sound administration of Local Funds, but the spirit of combination and foresight which should inspire the proprietors to make these improvements their own is not yet in existence. They suffer for it in this way, that while their Junima is naturally based on an average year's profits it is hardly credible without experience what unmeasured barrenness a bad season entails. In two out of the three last years the Dholka estates have hardly had any rice crop at all, and in one of these the wheat, and in another the Khureef, crops were scarcely worth gathering.

The subject of introducing money rents has lately been discussed, and was thus finally disposed of by Her Majesty's Principal Secretary of State for India—"There seems to be no necessity for any authoritative interference between the Talookdars and their tenants, who, it is stated, do not even claim any rights of occupancy, and whose payments to their landlord are made by a division of the crop according to a Dharo, or custom, which is said to be well understood and strictly observed by both parties. I shall, however, be glad to learn that arrangements have been made for gradually substituting payments in money for those in kind, especially in the larger Talookas, which are too extensive for the personal management of the Talookdar, as such a change would greatly tend to secure the ryot against the powers which must in such cases be entrusted to subordinate agents, by whom they are not unlikely to be occasionally abused." In fact, where a village is held by several sharers who have not more than two or three hundred acres a piece, or even where one Talookdar has a whole village, the Bhagbuttaee has the good effect of finding the landlords something to do, and tightening the bonds between them and their tenants. But the Talookdar of twenty villages is sure to have more evil influences about him than the Talookdar of one, and comes with feebler powers to heavier duties. It is not said in the Despatch how far Government are to interfere in introducing cash rentals, but Act I. of 1860 makes it legal to let the lands of attached estates on rentals.

based on the survey assessment. There is little doubt that rents at an advance of 50 per cent. on the survey rates, inexpensively collected and honestly accounted for, would equal or exceed any income got under Bhagbuttaee, and greatly improve the condition of the tenantry.

If the Bhagbuttaee is not perfect, it has, however, the advantage of keeping the rents to a fixed standard. The tenant has not to fear the competition of the cottier system, and he knows that his landlord will not be helped by the Revenue Officers, nor by the Civil Court, in exacting more than the Dharo\* allows. For his greater security the Dharo of every village,

\* Custom of the village.—See Act I. of 1865, Section 41.

confirmed in the presence, and attested by the signatures, of both landlords and tenants, forms part of the record of the present settlement. As a matter of fact, exactions are rarely attempted; and as long as a tenant conforms to the Dharo he is practically as safe as a cultivator in a Khalsa village.

He is, however, universally admitted to be a tenant from year to year. The tenants have never set up a claim to any better right, and it is very justly decided that there is “no necessity for any authoritative interference” on behalf of a class who are not suffering under any peculiar hardship, nor sensible of any ground of complaint. Besides the protection of their system, they are protected by the interest of their landlord, and against harsh and summary ejection they are protected also by the Law (Act I. of 1865, Section XLIII., chapters 1 and 2), which by requiring six months’ notice of the termination of tenancy on either side gives time for sudden spite or enmity to subside, casual disputes to be arranged, and the mutual interest of the parties to be duly considered. In fact, the ejection of tenants is at present so very rare as to be quite unimportant.

Such are the acknowledged rights of the inhabitants of Talookdaree estates. The object of the survey of them commenced in 1863 was (1) the valuation of them for the purposes of Act VI., and (2) the better settlement of the Jumma, or land revenue. It was necessary to make not a field survey, but a



distinct survey of each estate, that is, of as much land as is separately and indivisibly responsible for the debts of one person, or of two or more persons holding their land in common. Within this the largest block of uniform soil which could be conveniently measured and classed was taken as the unit of the survey. Roads and rivers were taken as boundaries of numbers, and the average size turned out to be about 40 acres in unenclosed country. Lands held by the Talookdar's servants or village functionaries were not separately measured, for these lands are his resumable property assigned for the wages of these people, instead of payments in money. They and the Durbaree lands are measured together as those on which the Talookdar's Jumma is assessed. On the lands given by him to Brahmins and others Jumma is not assessed, and for a further purpose these latter have been separately measured and classed.

The State has, of course, never had an opportunity of granting lands in Talookdaree villages. All such grants have been made by the Talookdars, and fall under Section 3 of Act VII. of 1863. They may be defined technically as all grants which the Talookdar, whether from the nature of the gift or lapse of time, cannot legally resume. In virtue of that section Government is not bound to respect these alienations by Talookdars if at any time compelled to assume the management of an estate. That is to say, on such an occasion the value of these lands would be liable to be taxed at the same rate as that of the Talookdar's own lands.

But as it did not appear that such alienations had hitherto been charged to the Jumma when estates were attached, nor included in the estimates of produce when the Jumma was fixed upon estimates, Government were pleased not to include these lands in those on whose value the Jumma is fixed in the present settlement. In order to limit this indulgence, however, to bona fide free holdings it was necessary to record them, which had not up to this time been done; and in consideration of the recogni-

tion and registration thus extended a charge of one-eighth of the

Government Resolution, Revenue  
Department, No. 1804, April 26th,  
1864.

assessment fixed on each such holding by the survey is imposed on the occupant, and collected and paid in by the Talookdar, who is

patron or grantor of the holding. Government consent to accept this lighter tax only on the alienations recorded at this settlement, and not on future ones, and the register of those found existing forms the register of recognized alienations by Talookdars at the settlement of 1863—6.

The alienations were thus disposed of, and it remained to shape a plan for assessing the Talookdar's own property. The object was to get rid of the inequality natural to settlements made on imperfect data, and to establish some kind of ratio of assessment to value for general adoption. The value of the estate has always been an important element in calculating a Talookdar's Jumma, and it appeared that some point in the scale of the usual Khalsa survey assessment below the full rate might be found to form a fair standard. This point might be determined by finding what amount of the survey assessment was equal to a Jumma fixed at a fair increase on the previous Jumma of the greatest number of estates, and it seemed that if the Jumma was fixed between 50 and 70 per cent. of the survey rates (as the assessed estate is more or less prosperous) it would give scope for a fair increase on the old Jumma, such as the improved prospects of agriculture warranted. It was settled, therefore, that the Jumma of Talookdars is to be not more than 70, nor less than 50, per cent. of the survey rates. Some estates already assessed above the maximum were reduced to it, and others were so far below it that they cannot judiciously be raised at once to the minimum, but the bulk of the villages have for the first time the advantage of a land tax fixed on a clear and equitable principle. It should, of course, be here kept carefully in mind that neither 70 per cent, nor any other proportion of the survey rates, has any intrinsic propriety, but that the survey assessment has merely been called in to gauge the value of the estates, so as to bring the Jumma of each to one and the same proportion of the value.

The field work of the survey of the whole four districts was carried out by one Measuring and half a Classing Establishment\* between January 1863 and March 1866. The cost was under one anna per acre. The new settlements were partly introduced in 1864-5 and completed in 1865-6.

The new Jumma Kurar, or agreement, (looking to past experience the term "lease" should be carefully avoided) contains nothing injurious to the rights of the Talookdars. It is rather explanatory than anything else, more particularly in regard to the alienations, the service assignments, and the Talookdar's duties connected with his village police. All foreign matter not relating to his landed property and the lawful charges on it has been removed.

The object of all the proceedings which have been here described was the restoration of an ancient class of landed proprietors. In order to give the fullest authority to the re-establishment of their proprietary rights, Government were pleased to provide in Section XX. of the Talookdaree Act that the Talookdar, when once more free from embarrassments, should "be the absolute proprietor of his landed estates." As the work proceeded it was noted that there were some estates, a not unimportant minority, which, from better management or better luck, were not in want of the relief which the Act supplied. That the favour which had been extended to the embarrassed should not by an accident be refused to the more provident, it was resolved by Government\* that the introduction of the new Jumma settlement should be the occasion chosen for declaring that the lease-hold of the latter is ended, and the ancient rights of the Grassias established once more. "His Excellency in Council desires the delivery of agreements to be of itself sufficient proof of the recognition of proprietorship," and no restriction has been attached to this recognition, except in cases\* where there is reason to suppose that unliquidated debt exists. In these the agreement will be simply withheld until the Talookdar shall have emancipated himself.

\* Under Mr. N. B. Beyts, Assistant Superintendent Revenue Survey.

\* Revenue Department, No 3975, September 21st, 1865.

And for the future protection of the now proprietary body, it is further provided that "a Talooka, or portion of a Talooka, is not to be sold for arrears of Jumma, except as a last resource to collect the Government dues, and that when the present work of the Settlement Officer under Act VI. has been completed, no such sales shall be finally carried out, except with the previous sanction of the Revenue Commissioner."

As a yet further protection, it was also ordered "that all sales of Talookdaree estates, or portions thereof, in the Ahmedabad district shall be conducted by the Collector, on the requisition of the Court, under Section 248 of the Civil Procedure Code, and the Collector will then consider whether the provisions of section 244 of the same Code may not be applied to stay the sale and satisfy the decrees by other means."

With the long decline of agricultural prosperity arrested and reversed, with the old incubus of debt removed, with all their ancestral rights acknowledged and confirmed, with all reasonable protection to their property, with improved domestic habits, under an intelligible revenue settlement and thoughtful and sympathetic superintendence, with a vast expansion of the opportunities of education and of the means of transit, the restoration of the Talookdars is no longer a hopeless task. It may, perhaps, be conceded that the past three years have not been without substantial results, nor without promise for the future in the readiness shown by the Talookdars to admit the possibility of better things. If progress seems slow, it may yet be remembered that the fruits of these operations will appear chiefly in the next generation, and the work of the present day is patiently to keep alive and extend the little growth of hope which has succeeded to so many years of barrenness.

*6th June 1866.*

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# APPENDIX.

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## APPENDIX.

### FORM OF JUMMA AGREEMENT USED IN THE TALOOK- DAREE SETTLEMENT OF 1863—6.

TO THE MANAGER (WYWUTDAR) AND ALL THE SHARERS  
OF THE VILLAGE OF ———.

The Sircar is pleased to agree with you for the Jumma of your village of ——— for 23 years, from Sumvut 1921 to Sumvut 1944.

The terms of this agreement are as follows :—

1. You shall pay to the Sircar the full sum (કુલ અંકડો) due, Rupees ———, yearly in the following instalments :

2. In this sum (અંકડો) there are three items (રકબો). The detail of these (તેઓની વપશીલ) —

I—The Jumma of your Durbaree lands to be paid by you is Rupees ———.

II—The Sunudee Salamee on your alienated lands, as per Yadee appended, is Rupees ———. This you will collect from the alienated land-holders.

III—An Improvement Fund (શુધારાનો ફર) at the rate of one Anna for every Rupee of your Jumma. Of this you are to pay Rupees ———, and the alienated land-holders Rupees ———, as shown (અર્થશીર્ષક) in the appended Yadee.

3. If any Sharer shall fail to pay his Jumma Government will give over the management of such share to the other Sharers until satisfaction shall be given to the Sircar that good management will be observed in future. The Sharers will manage such share and satisfy the Government demand thereon, and pay the owner the balance, if any, after deducting expenses (બાકી રહેતે ખર્ચ જવા) and 10 per cent. for the management.

4. The Jumma of each Sharer is fixed according to the land in his possession. He who holds the land will be required in every case to pay the Jumma of it.

5. Whoever shall be appointed Manager (Wywutdar) by Government shall collect the Jumma from all the Sharers. Those Sharers whose names are entered in the Sircar's books shall be answerable to the Manager (Wywutdar) for the Jumma of their sub-sharers (Peta Bhagdars), and the Manager (Wywutdar) shall be answerable to the Sircar.

6. Every Sharer shall be responsible for the repair and good orders of the survey boundary marks on his own land.

7. The Sircar has not fixed, during the currency of this lease, any higher Jumma on account of Bagayet cultivation. You should, therefore, increase such cultivation by every means in your power.

8. The Sircar does not interfere in the management of your villages, but you must agree to conform to the following clauses:—

I—You are answerable for the prevention of theft and disorder in your village. You are required to give attention to this duty yourselves, and you are also required to pay such Police Establishment as the Sircar thinks proper for this service. If you do not, the Sircar will add the money to the Jumma and pay them direct.

II—You are responsible for the village expenses, and you bear them, according to custom, by giving land or money. You should arrange these expenses according to the size of your village, and if you find more land to be alienated for service than what is required you should take rent from the surplus that you may not suffer loss.

III—The Sircar has made a separate settlement of the alienations you have made up to this day. In future if you alienate land the Sircar will still continue to take such land into account in fixing your Jumma, so that if you give away land the Sircar's Jumma for such lands will still be levied from you.

9. The Improvement Fund will be expended on works and schools, which will profit your estate, and be of use to the people thereof. You are, therefore, not to consider that it is an enhancement of your Jumma.

10. This agreement is made certain for twenty-three years, in order that you may exert yourselves with confidence in the improve-

mont of your estate. At the end of that period according to the good condition of your cultivators will be the favour of Government towards you.

Signed, in token of agreement,

*Wyrutdar.*

*Settlement Officer.*

*Chief Sharers.*

## DIHARO, OR SYSTEM OF CROP PARTITION BETWEEN LANDLORD AND TENANT IN A DIHUNDOOKA VILLAGE.

1. In KHUREEF CROPS—Jar, Bajree, Buntce, Mug, Mut, and other common food grains.

*Rule for Mankhul, i. e.* where the produce is brought and divided in the grain-yard—

### I—*Tenant's perquisites*—

- (a) Pay in kind of the labourers employed for reaping (less one labourer) at the rate of wages at the time.
- (b) Purtharo (interest on tenant's capital invested in stock) two seers in every maund (5 per cent. of the whole produce).

II—*Durbar's perquisites*.—Mapoo (interest on the Grassia's capital expenditure), one seer in every maund ( $2\frac{1}{2}$  per cent. of the whole produce).

### III—*Village perquisites*.—For every 10 maunds—

- 6 Seers for Potter..... 6 Seers Thakore Mundcer.
- 6 Seers for Puggce ..... 6 Seers Waneo.
- 6 Seers for Bungio ..... (about 5 per cent.)

After these deductions\* the grain is thus divided—

If the tenants are the Grassia's relatives, Rajpoots or Charuns, the Durbar has one-third and the tenant two-thirds.

If the tenants are Kolees, Bhurwars, &c., the Durbar has half, and the tenant half.

If a tenant manures his field, only a third is taken from him for three years, and after that according to the usual Dharo.

*Rule for Dhal*, when an estimate is made of the standing crop. —No perquisites are taken, and the grain is divided in the proportions shown above.

## 2 In RUBBLE CROPS—cotton, wheat, gram

I—*Gram*.—In case of Mankhul, perquisites as above in Khureef, and besides, seed is allowed to the tenant thus. He is allowed the equivalent in grain at the time of reaping of the price of five Bengal seers per beegha at the time of sowing (that being the amount he is presumed to sow). If there is not enough produce to repay the seed one year, it is given in the next. The grain is then divided as in Khureef.

In case of Dhal the seed only is deducted (no perquisites), and the grain is divided as above.

II—*Dry Crop Wheat*—In case of Mankhul perquisites, as in Khureef seed, at 10 seers (Bengalee) per beegha estimated as above. Division of grain as above

In case of Dhal no perquisites, but seed. Division as above

III—*Cotton*—In case of Mankhul, tenant's and Durbar's perquisites as in Khureef. Village perquisites three seers, instead of six. Partition of produce in the same shares as Khureef.

In case of Dhal no perquisites are taken.

IV—*Irrigated Wheat*—Seed is allowed at two maunds for every beegha, and the Durbar's share is one-fourth and the tenant's three-fourths

V—*Sugar-cane*.—The following perquisites are deducted :—

1—*Tenant's perquisites*—

Equivalent in sugar of cost of seed.

Ditto	water-bag.
Ditto	hire of pan.
Ditto	feed of bullocks.
Ditto	supply of water.
Ditto	cost of mill.
Ditto	pay of boiling-man.

and as much sugar as they can make in three days and nights.

2—*Durbar's perquisites*—

Mapoo, at one seer per maund ( $2\frac{1}{2}$  per cent).

Koowur, half a maund for each water-bag.

Royalty of well one maund ditto.

3—*Village perquisites*—Five seers each to Village Potter, Barber, Puggee, &c. &c.

After these deductions the produce is divided one-eighth to the Durbar, and seven-eighths to the tenant.

Lands waste over ten years are allowed for three years rent free to any one who takes them up.

Waste lands producing grass are rented out.

Burwars who keep cattle and do not cultivate are charged 15 annas per person as grazing fee.

If any other than the owner cultivate alienated lands they are charged 15 annas per field

## MEMORANDUM ON KUSBATEES.

1. The Kusbatees of the Ahmedabad Collectorate are of two races, viz. pure Mussulmans and Rajpoot Purmars, who became renegades. The Mussulmans are simply part of the influx of the conquerors from Delhi, the Purmars were one of the wandering Rajpoot tribes in very early times. They travelled from Aboo to Moolce in Kattywar, and while at that place one of their Chiefs was converted to Islam, and received from the Gujarati Emperor, Mahmud Begura (A. D. 1480), the gift of Ranpoor in Dhundooka. His younger brother followed his example, and received Botad in Dhundooka, which his family ultimately lost, and removed to Dholka, when they took service under the Mussulman Viceroys, and were ancestors of Bapoo and Mulick Meia, whose names are well known.

2. The Kusbatees now at Ranpoor thus received their lands as the gift of the Mussulman unquestionably, but it was a very recent conquest, and had just been taken from the maternal uncle (Ranjee Gohil) of the Purmar Chief, who was doubtless installed as a tributary Chief, with the same rights as all others who have since become "Talookdars."

3. The Purmars of Dholka, on the other hand, took military service with the Mogul, and were on the same footing as the Delhi Kusbatees. Out of the six Kusbatee estates which the English Government found in Dholka three were held by Purmars (all of one family), and three by Delhi Mussulmans. In Veerungam there were seventeen villages held by Delhi Mussulmans. These are the Kusbatees proper.

4. Their holdings are broadly distinguished from those of the Grassias and Mehwassees, inasmuch as they neither hold in defiance of the Government, nor by deed of gift from it. In fact, their connection with the supreme power, in so far as it was authorised at all, was a contract. The Kusbatees were not connected with the villages before the contract, and they obtained nothing of the nature of a Sunnud to make the contract perpetual. On the contrary, Colonel Walker states that it was in the form of a lease, terminable at the end of a fixed number of years.

5. Thus the presence of Kusbatees always argues the previous presence of the supreme power, and this is fully supported by the history of the Gujarat Sultans. The regular paths of their arms are two. The first from Delhi down to the seat of Government at Ahmedabad, on which they came into collision with the Edur Chief; and the other from Ahmedabad towards Khandeish, passing through the Kaira Collectorate, and coming into collision with the Champaneer and Rajpeepla Chieftainships. Veerungam and Dholka lay within the sweep of these marches, but Dhundooka and Gogo did not. The map of Kattywar in Revenue Selection No. XXXVII. will explain this at one glance.

6. The extent to which the Dholka Rajpoots were dispossessed by the Moguls belongs to the subject of  
A. D. 1748. Wanta. In the earliest Dehjarra of which

I am aware the whole prosperous villages are divided into three classes, viz. those still held by Rajpoot Grassias, those held by a variety of Officers in Manotee, and those held by the Government direct. The holders of the middle class are various. An Ameen and a Mujmoodar, one or two Delhi Mussulmans, and principally the Purmar Kusbatees, Futtch Mahomed and Ucha, representing the two branches of that family, which reunited in Bawa Meia. The villages so held by Bawa Meia at the beginning of British rule formed his Talookdaree estate, but there are numerous other villages then (and consequently since) Khalsa, which his family had once held on precisely the same terms.

7. Colonel Walker appears to have been perfectly well aware that there was no analogy between the holdings of the Grassias and those of the Kusbatees. He divides the latter into two kinds—1st, a leasehold from the Mahratta Government, and 2nd, a holding by private contract, of which the Government took no official cognizance. The first was of villages which had become waste, and the latter generally of Government villages unable to pay the demands of the farmer of the Purgunna. There should have been added, I think, some few villages mortgaged by their Grassia proprietors.

8. It should not be forgotten that in A. D. 1818 the principal Kusbatee of Dholka actually wished to resign the management of his estate on receipt of a pension, and would have done so but for the interested dissuasion of his agents. He was quite aware that his people neither ever were nor were fitted to be landed Chiefs. In that capacity they were victims of their Karbharees, who soon brought them to ruin.

9. I cannot refrain here from noticing again the ultimate opinion expressed by Government as to the holding of the principal Kusbatee of Dholka. It is almost in the words of the late definitions of the Talookdaree tenure in general, and yet it is so at variance with the recorded opinions of the Officer whose signature is appended to it as to the rights of the Rajpoot Grassias, and so just a description of a very different class of rights, that I cannot conceive how the two became confused. The pith of the whole distinction is that the Grassia had maintained his rights hereditarily; the Kusbatee had taken his by contract recently. Government, therefore, say of the Kusbatee—"his family have held not as proprietors, but by sufferance of Government, lands, the whole history (and it does not commence at a very remote period) of which shows they are resumable at the will of the sovereign." If this were said of the Gametees of Dhundooka and Gogo, it would not be true. But they write with perfect truth of the Kusbatee—"Like the renter of a farm, the Talookdar (in this special case) has no right to continued possession. His right ceases when the period of settlement expires; or, in other words, he has no title

Government to Collector, September 30th, 1829.

to the produce till the settlement is renewed, and that may be so or not at the option of Government." Five years before the writer of this was describing the Gametees as "owners" and "small proprietors." It is impossible to believe that he had not these same holders in view when he said that the Dholka Manotedars had held "not as proprietors."



10. Less is known about the Veerungam Kusbatees, but it is not less certain that the English Government found them holding "not as proprietors." They assert themselves that they came from Khorassan, and received their villages from the Waghela Kings of Puttun. In favour of this story there is to be said that one of these kings is recorded as having Mahomedan retainers. It is said that under the Mogul Government they paid a Jumma calculated on the produce, which shows that they were, at any rate, not in the first rank of independents. This continued under the Peshwa until A. D. 1804, when Babajee Apajee, the Gaekwar's officer, demanded of the Kusbatees a greater Jumma than they would consent to pay, and they were dispossessed during the whole of the second farm of Ahmedabad until A. D. 1814, when they were reinstated by the Peshwa's authorities. After this the management appears to have been sometimes with them and sometimes with the villagers, although mostly, under British rule, with the Kusbatees, until 1823, when the Collector was induced by their obvious incompetence to propose to Government a scheme by which they should retain nine villages and give up the rest. The proposal was that they should be allowed such liberal terms as to make their profit on the remaining nine nearly as much as it had been on the whole seventeen. They had had twenty per cent. on the seventeen villages, and they were allowed not quite forty per cent. on the nine.

A. D. 1824.

The rental paid for the nine villages, in the first year of the new arrangement, was Rupees 1,925, and that paid in 1860 was Rupees 2,837. These liberal terms, however, and possession under any terms, were expressly stated to be continuable only "during the pleasure of Government. The consolidated privilege on the nine villages is no better in kind than the extended privilege over the seventeen."

11. There are four villages in the Matur Talooka of the Kaira Collectorate, which should be added to those under Ahmedabad, as being "Talookdaree" in the same sense as other Kusbatee villages; their names are Ruroo, Poonaj, Chandna and Koonjra, and I believe the merits of the claims of the Kusbatees on them is still the subject of discussion.

12. They are, however, simply part of the Dholka Kusbatees' estates, having all been at first in the Dholka Purgunnah. They shared the general fate of all Talookdaree estates as long as they were under Dholka, having their rentals fixed yearly very much at hazard, and in 1817-18 they were separated from the estates they belonged to and put under Kaira, just before the Collector first tried a rack-rent

of the Dholka Talookdaree estates, and then fixed the Talookdars' share at 20 at per cent. of the Rajbhag, and subsequently Government increased that proportion to 30 per cent. The above four villages went on under the old system until it occurred to Bapoo Meea, in A. D. 1834, to apply for the same terms in his one Kaira village as he enjoyed in his twenty-seven Ahmedabad ones. He never got the benefit of the change, as his whole estate was meantime made Khalsa, with a pension to him ; but as the current leases of the other three villages fell in, 30 per cent. was reserved, and has been paid up to 1850 to the Kusbatees, although the management has been under Tulatees, as in Government villages.

13. The case of these villages, then, under British rule, is (except by caprice or accident) neither better nor worse than that of other Kusbatee villages. But I think that, if the Officers concerned had come to a fair understanding, the allowance of 30 per cent. granted after Bapoo Meea's petition would have been withheld.

14. In the correspondence which took place the Collector did not clearly explain how the villages came into the Kusbatee's hands ; but the Revenue Commissioner, Mr. Williamson, in handing it up, and recommending that the Ahmedabad settlement be extended to the Kaira villages, makes an exception if the villages prove to be held on nothing but leasehold. He says—"The Collector should take care, however, that villages which the Kusbatees hold as simple tenures\* (with rights analogous to those of *common Mutadars*) should not be confounded with those to which the remarks in the preceding paragraphs apply ;" that is, those to which the indulgence is to be extended. Now, it was Mr. Williamson also who, five years earlier, wrote the passage I have quoted in paragraph 9, and which begins—"Like the *Mutadar of a village, or the renter of a farm*," the Talookdar (Bapoo Meea) has "no right to continued possession." Surely, no more proof need be cited that he was debarring this spurious Talookdar from the privileges of hereditary Talookdars.

15. All these four villages were held with rights analogous to those of common Mutadars, as were also a large porportion of those in Dholka. It is easy to read the history of each by the tenures between which it is still divided, *c. g.*

1. Ruroo.—There is a *Wanta Ruroo* paying an Oodhur or fixed Jumma, and a *Tulpud Ruroo* which Bapoo Meea held.

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\* Query : Farmers or Tenants.

The Wanta is held by a Rawul Rajpoot, evidently of the family which anciently possessed the sixty-six villages of Matur (Chasotea), where members of it are still found. It is plain that the Rajpoot was dispossessed and assigned a Wanta by the Mogul Government; then in the confusion before the Mahratta rule began the Thakoor of Sanund got possession of Ruroo Tulpud, and from him it passed in some way unknown to the Kusbatees. The Muttadars of the village declare that it is properly Khalsa, and that the Kusbatee has no rights in it. The district records say that the village was held on farm by the Sanund Thakoor, and mortgaged by him to the Kusbatee.

2. CILANDNA.—A Rawul or Gohil Rajpoot has Wanta in this village also, the history of which must resemble that of Ruroo. The village was restored when waste, and apparently mortgaged to an ancestor of the present Kusbatee, who, however, was simply a farmer on lease. The village appears as 'Khalsa' in Dehjarras written during their holding.

3. KOONJRA.—Some Waghela Rajpoots of Rasum, in Dholka, have Wanta in it; therefore the village must have been 'Khalsa' under the Mogul. The Kusbatees protected the Tulpud part of it, and actually acted as Patels for some time.

4. POONAJ.—No doubt, as stated, originally formed a part of the estate of the Thakore of Sanund. But there is a Charun or Rajpoot bard holding Wanta in it, so that the Mogul Government must have had the Tulpud part and the Sanund Thakoor the Wanta, which he gave to the Charun. It passed to ancestors of the present holder simply as Munotedars, being entered as a Government village under their management as early as A. D. 1748. The actual holders, however, derived it by purchase from a relative as late as A. D. 1824-25.

16. All four villages, therefore, were once the property of Rajpoot Chieftains, who were expelled by the Moguls, and afterwards reinstated in a quarter of their villages (Wanta), either rent-free, or under Sulamnee. The other parts of the villages since held by the Kusbatees were absolute crown-lands, and their rights are clearly of that unrecognised kind which Mr. Williamson considered as not vested in the land, but the management, like that of a village Officer.

Now, examining into the history of the Dholka Kusbatee villages on the same principles, I find that out of forty-three villages held by them at the beginning of British rule thirty-one appear to

have been obtained in this same unrecognised manner. Of the other twelve (belonging to Bawa Mea), some are held on rather better title, having apparently been mortgaged by the Grassias to the Kusbatees many years before British rule, and others probably were taken up when waste and restored. The evidence on this subject is not very complete. There appears to be this difference, however, that in these twelve the Kusbatees formally undertook the part of quasi-proprietor or founder, instead of assuming that of Village Officer.

18. The principle of pensioning an incompetent Kusbatec, and resuming the estate of one who dies heirless, as pursued in Dholka, appears a perfectly fair and just one. That of allowing the full benefits of Talookdaree management (30 per cent) to Kusbatees, who have been discontinued in the management for good reasons, as pursued in the three Kaira villages, is unnecessarily liberal. It is also erroneous in principle; for being a reserved percentage of the produce it gives colour to the notion that the Kusbatees retain *some right* in the land, whereas their right is only to such consideration for long services as Government may please. A moderate fixed pension would meet the requirements of the case.

19. The estates continued in Kusbatee management are not very numerous. The following table (for Ahmedabad and Kaira) shows how they have been decreased :—

	1	2	3		4	
			Managed by Government.		Managed by Kusbatees.	
	At the beginning of British Rule.	Resumed by Government	Managed by Government during disputed succession.	Ditto permanently allowing 30 per cent to Talookdar.	As superior holders under the Survey rates.	In hands of Kusbatees on fixed settlements or leases.
ESTATES ....	14	2	1	1	2	8
	(Including Chandna, in Kaira)	and part of another.		(also 2 villages belonging to Dholka Talookdars).		
VILLAGES.....	56	22	2	3	12	17

Nine of these villages are held by the Verungam Kusbatees under a kind of contract, the terms of which allow them 20 per cent of their receipts from the cultivator. 11 villages of Bapoo Meia's estate have

been given to his son, Sher Meia, as a superior holder, under the Survey rates; Luteef Khan, son of Muhmud Khan, has been allowed to succeed to his father's Talooka (8 villages), with the right of levying double the Survey rates; Jehangeer Meia holds his single village on the same terms as Shere Meia; the successor to the estate of\* Shere Khan (2 villages) has not yet been admitted to possession.

## MEMORANDUM ON WANTA-LANDS.

I have described the Kusbatees and Wanta land-holders as belonging "rather to the privileged class who existed by the countenance" of the former Governments than to that which, like the Talookdars, successfully maintained their position against them. I have also shown how the Kusbatees may be described as quasi-Talookdars. From the same point of view the Wanta-holders proper may be called ex-Talookdars.

General Report No. 62, paragraph 11.

Memorandum No. 65, of July 28th.

2. In the present day the term "Wanta" is used in Kattywar to denote the land which a proprietor reserves for his own subsistence when he sells his estate. It is understood to be free of all taxes. The important thing to observe is that it is essentially what *remains* to the owner of the soil, and not *what he sells or assigns*.

3. The well-known account of the origin of Wanta in Guzerat corresponds to this definition. The first Mahomedan invaders found the country partitioned out into estates of large or small Chiefs, whom they forcibly deprived of all but a fourth part, which took the name of "Wanta." The Wanta also was generally limited by a rent-charge, but not always on the same principle. From the Dustoor-ul-Umil of Todur Mull, the usage appears to have varied from the Baroda Sirkar,—where Wanta was rent-free "according to ancient rule,"—to the Ahmedabad Havelee, where it paid half as much as crown lands. In Thasra it paid a fixed tax; in Muhooda and Mehmudabad a fourth of the produce.

4. Of course, the Wanta of the present day is very different from that fixed by the Mogul. The Wanta-holders have none of them documentary titles, as far as experience has gone; and the limits of

\* The estates of Jehangeer Meia and Shere Khan have recently been resumed, pensions being allowed to the families of the Kusbatees.

their holdings and payments must be accepted according to the first trustworthy record prepared under British rule. The present extent of this important alienation in the Khalsa villages of Ahmedabad and Kaira, as recorded in the Alienation Lists, will be perceptible from the following Table:—

1	2	3	4	5
Collectorate.	Wanta.	Full ordinary rental value.	Other alienations.	Full ordinary rental value.
	Beegas.	Rs. a p	Beegas.	Rs. a. p.
Ahmedabad .....	1,81,402 9 2	1,85,164 5 0	3,82,516 10 7	4,26,677 3 8
Kaira ... ..	83,350 4 15	1,85,178 0 6	4,11,212 1 0½	9,62,203 5 7

Every kind of alienated land, including service lands, is shown in column 4.

5. The following more detailed Tables, showing (1) the number of Khalsa villages in which Wanta is found, and (2) the amount of Wanta in the Khalsa villages of each Purgunna separately, afford matter for interesting observation —

TABLE 1.

*Ahmedabad*

Villages containing	Vecungram.	Dholka.	Duskrecc.	Jetalpoor.	Puraltej.	Dhandooka.	Gogo.	TOTAL.
Wanta.....	31	83	28	37	11	4	0	197
No Wanta .....	43	19	92	20	116	19	4	313

*Kaira.*

Villages containing	Matur.	Thaara.	Mahoonda.	Kuppurwunj.	Napar.	Borsud.	Neriad.	TOTAL.
Wanta.....	61	14	9	7	19	14	20	144
No Wanta .....	32	65	87	61	24	88	52	354

TABLE II.

Ahmedabad.

Alienated lands as shown on the Lists of the Alienation Department.	DHOLKA.		DUSKROEL.		JULIPOOR.		VEERUMGAM.	
	Beegas.	Value of a full rental.	Beegas.	Value of a full rental.	Beegas.	Value of a full rental.	Beegas.	Value of a full rental.
Wants.....		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.
	1,02,264 7 13	77,258 15 0	9,137 4 18	14,931 9 9	18 14 5 1	52,766 1 7	46,768 10 17	36,008 10 9
Other lands, including service.	1,53,012 18 14	50,946 6 0	67,565 18 2	1 19 37 4 2 3	40,662 17 15	1 20 20 14 2	29,803 18 9	31,781 11 3

Alienated lands as shown on the Lists of the Alienation Department.	PURANTEJ.		DHUNDOOKA.		GOGO.		TOTAL.		STATE DUES.		Proportion of rent-charge to full rental.
	Beegas.	Value of a full rental.	Beegas.	Value of a full rental.	Beegas.	Value of a full rental.	Beegas.	Value of a full rental.	Rent-charge payable out of value, &c., to the State as Saleemee.	Rs. a. p.	
Wants.....	3,376 10 13	Rs. a. p. 4,294 2 11	1,731 10 0	Rs. a. p. 2,904 13 0	.....	Rs. a. p. ....	1,81,402 9 2	Rs. a. p. 1,88,164 5 0	25,084 11 1	13 per cent.	
Other lands including service...	40,897 0 42	56,191 11 10	45,256 10 0	52,668 6 0	5,577 6 15	3,187 11 3	3,82,516 10 7	4,26,029 2 1	88,018 6 6	21 per cent.	

TABLE II.—(Continued).

Kaira.

Alienated lands as shown on the Lists of the Alienation Department.	MATHUR.		NERIAD.		MAHONDA.		BOBSUD.		NAPAR.	
	Beegas.	Value of a full rental.	Beegas.	Value of a full rental.	Beegas.	Value of a full rental.	Beegas.	Value of a full rental.	Beegas.	Value of a full rental.
Wanta.....	28,755 18 2	Rs. a. p. 62,123 11 2	21,530 8 10	53,728 2 6	3,381 17 17	Rs. a. p. 8,643 1 3	2,664 4 0	8,115 11 5	10,455 16 18	Rs. a. p. 31,872 9 2
Other lands including service...	87,983 2	11,89,805 5 5	80,633 10 7	2,01,903 0 5	82,578 1 5	2,00,679 12 7	36,320 5 7	1,03,086 0 8	39,218 13 9	1,04,698 11 10

31

Alienated lands as shown on the Lists of the Alienation Department.	THASRA.		KUPURWUNI.		TOTAL.		STATE DUES.		Proportion of rent-charged to full rental.
	Beegas.	Value of a full rental.	Beegas.	Value of a full rental.	Beegas.	Value of a full rental.	Beegas.	Rent-charge payable out of the value, &c., to the State as Balance.	
Wanta .....	10,596 14 0	Rs. a. p. 15,839 7 8	5,743 5 10	Rs. a. p. 3,285 5 4	●	Rs. a. p. 1,85,178 0 6	46,676 2 7	Rs. a. p. 46,676 2 7	25 per cent.
Other lands, including service.	41,224 9 15	1,00,466 12 3	44,183 18 15	62,063 10 5	4,11,942 1 0	9,62,203 5 7	3,35,045 2 6	3,35,045 2 6	34 per cent.



6. From Table No. 2 it appears that the reserved rent-charge (or Sulamee) in Kaira is nearly twice as high as that in Ahmedabad,—that in the former being about 25, and that in the latter about 13 per cent. of an ordinary rental on the land.

7. The Wanta lands are, generally speaking, in the hands of Rajpoots of one or other of the clans enumerated in paragraph 13 of my general Report No. 62. The Kaira Wanta-holders are very mixed. Those in Ahmedabad generally lie in genealogical groups, as the Waghelas in Dholka and the Jhalas in Veerungam. The main lump of Wanta is found in the hands of the hereditary proprietor, and smaller parcels have been sold (Wechanioo), or mortgaged (Geranioo), or given for service (Chakurioo), by him or his ancestors. The Purgunnas may be regarded in groups, as to the history of their Wanta, with the Mogul stations of Ahmedabad and Kaira as their centre. Thus in Jetulpoor, Duskroec and Matur, the Wanta is smallest in proportion to the whole area of the villages, and most saddled with Sulamee. In Dholka, Veerungam and Neriad, it is frequently above the traditionary fourth (apparently by subsequent usurpation), and very generally rent-free. In Kuppurwunj and Thasra it is found in a few villages only, and had perhaps some connection with the settlement of the Muleks in the latter Purgunna by a Sultan of Ahmedabad. It is rare also in Purantej, that Purgunna having formed part of the Eedur-wara, and not having been conquered in detail; while in Dhundooka and Gogo the term was unknown previous to British rule,—a settlement after conquest having never been effected at all in those districts by the Mogul.

8. There is a class of Wanta-holdings presenting considerable differences from the ordinary aspect of these alienations to which my attention was directed by the Resolution of Government noted in the margin.

9. These are certain double villages, where not only the lands, but the village site is parted into two, of which one part is 'Wanta' and the other 'Tulput.' There are three of these villages in the Ahmedabad Collectorate, situated in the Dholka Purgunna, and the

two parts are each counted for a village in the accounts. To increase the anomaly, the Wanta portions are held by regular Talookdaree tenure. The following Table will supply all needful particulars about them :—

Village.	Wanta Holder's Family.	Area of Tulput.	Area of Wanta.	Summa of Wanta.
		Beegas.	Beegas.	Rs. a. p.
Chundoesur .....	Rawul .....	2,716 2 0	4,333 7 5	1,051 0 0
Amliara .....	Waghela .....	3,723 17 3	819 10 18	260 8 4
Waotha .....	Waghela .....	3,151 13 10	1,348 18 0	431 0 0

Villages of the same form are found in the Kaira Collectorate, of which I append a similar Table for the sake of illustration :—

Purgunna.	Village.	Wanta Holder's Family.	Area of Tulput.	Area of Wanta.	State dues of Wanta.
			Beegas.	Beegas.	Rs. a. p.
Napar .....	Napar ... {	Mussulman Convert. .	3,865 10 5	4,000 0 0	1,298 13 11
	Betasee .....	Purnar. ....	1,543 5 0	4,000 0 0	1,486 14 10
	Napa ... {	Mussulman Convert.....	3,302 0 0	4 000 0 0	801 4 3
Muhoonda .....	Kyurpoor ...	Goel .....	3,274 0 0	1,780 10 0	2,107 7 5
	Thamna ...	Goel .....	.. .....	1,781 15 0	1,277 3 5
Neriad .....	Saloon .....	Raj .....	1,644 13 18	2,420 15 1	988 11 8
Borsud .....	Kuthana ....	Colce .....	1,700 0 0	812 0 0	2,095 11 9
Matnr .....	Rudoo .....	Rawul .....	.....	2,082 5 0	685 5 0

Of these, Kijurpoor has only been divided since A. D. 1826, when a separate lease was given for the Wanta, which is now, however, paying a Beegotee revenue, and is only Wanta in name. It is said that the Gaikwar first imposed a rent-charge on the Wanta to the amount of one-fourth of the whole rental of the village. In Thamna, on the other hand, the Moguls first imposed a rent-charge, and the Mahrattas doubled it. In Kutwana both parts of the village are held under fixed State dues, and the Tulput part is held by Rajpoots. Probably, it was simply an estate divided between two brothers. In the rest of the villages the Wanta-holder pays fixed State dues, and his privilege

is referred back to the Mahomedan settlement. The Wanta has a distinct part of the village site, and distinct cultivators.

10 Here then are a variety of phenomena with the same name, and a general resemblance. They serve to illustrate the hap-hazard management of the Mahrattas, who paid more regard to individual circumstances than broad principles. Starting from the same origin, the Dholka Wanta villages met with treatment different from all of those in Kaira, but similar to that of the adjacent Talookdaree estates. The Manludtar reports in A. D. 1821 that there were once fifteen villages in which there were lands separate from the Crown lands, and paying a Sulamce. Chundeesur was one of them, and paid 151 Rupees. The Mahrattas, however, did not respect the privilege of fixed State dues, and in A. D. 1766 Chundeesur Wanta paid 501 Rupees, and was shortly after treated as subject not to a Sulamce, or limited rent-charge, but to Juminabundy, or the full unprivileged share of State dues. At the beginning of British rule, in A. D. 1804, the Wanta village paid Rupees 1,188-1-11. The report does not mention the other two villages, but there can be no doubt that their history was precisely the same.

11. There is no reason apparent why the Mahrattas cancelled the privilege of the Wanta-holders, except perhaps in Chundeesur, the size of the Wanta, which was very probably augmented by usurpation. But the alteration took place so long ago that the Wanta-holders have now no claim whatever to the more privileged tenure. It only remains to consider the most convenient way of managing their holding under its peculiar circumstances.

12. I observe from the Survey Map of Chundeesur that the Wanta lands there are not *intermingled* with the Tulput. The whole of some 200 numbers which they comprise may be divided into four plots, each complete in its own ring-fence. No inconvenience can arise from treating these farms held in a single hand as distinct from the other numbers, and the revenue transactions necessary with the holder will, if the State dues of Talookdars are settled on the basis of the Survey assessment, be of the very simplest description, as the field operations of the Survey have been already carried out. It appears to me that the three villages should be taxed to the same amount and treated on the same principle as the other Talookdaree properties in Dholka.

13. The part of the subject to which I now pass in connection

No 1651, of May 5th, 1860.

with the Resolution of Government noted in the margin is that which immediately affects the existing Talookdars of certain Purgunnas, in whose estates are found Wanta lands quite distinct in character from the Jiwaee or sustenance lands given by a Talookdar to members of his family. This phenomenon has no place in Gogo, Dhundooka, or Purantej, for the reasons I have assigned. In the Ahmedabad Collectorate it is peculiar to Dholka and Veerungam, and the extent of it is shown in the subjoined Table :—

*Talookdaree Villages in which Wanta is found.*

Purgunna.	In possession of the Talookdar himself or his family	In possession of Rajpoots of another clan in a Talookdaree village.	In possession of Rajpoots in a Kusbatee village	Of uncertain history	Total.
Dholka .	31	5	1	13	50
Veerungam .	6	11	2	3	22

14. I believe that the presence of these Wanta lands marks the course of a conquest much more complete than a superficial view would now suggest, and that no other theory will explain it. There is little doubt that the whole of the smaller Chiefs of Dholka were entirely, and the larger Chiefs partially, put down and pensioned off with Wanta, and it is a matter of tradition that the present Mehwassee country in Veerungam once paid a regular rent (Tukseem Juma) to the Mogul. In latter days, when the Mogul empire fell to pieces, the Tulput part of the villages was seized either by the holders of the adjoining Wanta, or by new clans. In Dholka the Waghelas took back their own estates, but in Veerungam the best share was won by a new clan, the Kolce Thakurras, at the beginning of the eighteenth century. In this district, therefore, the original Jhalas are the Wanta-holders, and the more recent Thakurras the Talookdars.

15. This is supported by the oldest extant revenue schedule of Dholka of the year A. D. 1748, in which only 77 villages are entered under the head of "Grassias," the rest being all under the head of "Munotee," or farmed, whereas there were 111 Talookdaree villages at the beginning of British rule; and of these 77, 4 more soon became Khalsa, 9 passed into the hands of Kusbatees, and several more fell waste; while of the remainder, Wanta lands are now found in no less than 32, giving strong grounds for the belief that scarcely any

one Chief, except the Chief of Kôt (and he but partially), maintained his independence in Dholka. •

16. It may be said that this Wanta was probably land assigned by Chiefs to the younger branches of their family. But if so, I ask, why is it not found in Dhundooka and Gogo? And why is the Wanta in all the Gangur and Ootelia villages, some of the Sanund, and most of the petty Talookas, in the hands of the Chief himself? Wanta does not mean land *assigned*, but land *retained*. How then does it happen that the part retained is the smaller, and, as I shall show, *tributary* to the part resigned? How does it happen that the Wanta-holder and the Talookdar in the same village are sometimes of different clans? And how does it happen that in two adjoining villages Grassias of the same race hold Wanta lands, although the rest of the one village is Talookdarce, and of the other Khalsa?

17. I think it unquestionable that, although the original fourth of the village given as Wanta has been greatly encroached upon by the Mogul in the near neighbourhood of the capital, and much increased by the Wanta-holders in more distant districts, the tenure, wherever it is found, is a trace of the old Mogul settlement. The Wanta, however, in Talookdarce estates has never under British rule been treated as separate from them, and any Sulamee derived from it has not been directly enjoyed by Government. I find that the usage has been various as to including the Wanta in estimates of produce formed by the Revenue Officers with a view to fixing rentals. Sometimes the whole produce was included, sometimes the Sulamee, and sometimes neither.

18. Sulamee, however, is paid by most of the Wanta-holders to the Talookdar of their village. In Veerungam it appears to take the shape of a plough-tax, varying considerably in amount. In those villages where the Wanta is a property in separate hands this Sulamee must be treated as a charge on the property in favour of the Talookdar, established probably by force; and it is at least as respectable in its origin as the Giras cash-huks, which are supported by Government.

19. The date when such rent-charges were imposed would take us back to the convulsions out of which the present form of society emerged; and wherever they are found to be supported by the early records or otherwise, the Wanta must be regarded as the joint property of the Wanta-holder and the Talookdar. It is immaterial, however, as a revenue question, who the proprietors are, the Talookdar's Sulamee being in no sense a *State* charge or tax.

20. There seems to be a decided local feeling that Wanta was originally a *tax-free* grant. Wherever the Mogul Government saddled it with a Sulamee, the amount seems from the *Dustoor-ul-Umil* to have been declared and fixed at once, so that the grantee knew the amount of his estate from the first. And it appears to have been regarded by the holders as perfectly transferable, whether it lay in a Talookdaree village or a Khalsa. I may quote the case of Koowar, in Dholka, the Wanta in which has been sold by the holder (also Talookdar), and a separate hamlet built in it.

21. I am unable to see, therefore, how, without an enactment applicable to the subject, it is possible to interfere with the sale of any Wanta which is entered in the revenue accounts as such, on the plea that the right in it is not of a degree which permits alienation.

22. There are Schedules for Dholka and the Kusbatee villages of Vecrumgam, drawn up in A. D. 1820-21, which profess to give a detailed statement of the amount of Wanta in the Talookdarce estates. These, I believe, are the earliest complete authorities under British rule. In any villages for which no other statement than this has since been prepared, any claim in excess of the statement could be resisted by virtue of the undefined system pursued with the Talookdars. Attachment accounts will be found besides, in very many cases, which will establish the amount held in each case at some period during the last 30 years, and on what terms.

23. It may very plausibly be said that, where one quarter of the lands of a village is held rent-free, on the understanding that the other three become Crown property, it is a clear usurpation that the other three should now be held as private property. It is, however, an usurpation the origin of which is lost in the ruin of an extinct Government, and long antecedent to British rule.

24. When, however, the Wanta is held by the same man who holds the rest of the estate on Talookdaree tenure, the case is different. If such a person expects to retain the Wanta grant of the Mogul, he should be ready to resign the Tulput to Government. If he would retain the whole, he must expect to be subject to such State charges on the whole as are borne by other Talookdars. He established himself in his estate at the fall of the Mogul Government, and was subjected to his share of the expenses of the Mahratta Government along with the rest of his class and the town populations. He clearly himself erased the tradition of the original Mogul grant. I am unable, there-

fore, to see any reason why, in such cases, the Wanta lands should be discriminated at all, or admitted to any other terms than the rest of the Talookdaree estate.

25. This view, if held correct, will limit considerably, and make it very easy to ascertain, the amount of Wanta in Talookdaree estates, which I would propose to treat in the same manner as the Wanta in Khalsa villages. Wherever the Wanta is held by the Talookdār, or members of his family, it should be specifically included in the terms of any contemplated enactment affecting the Talookdaree lands. Wanta held by entirely distinct parties (being *an alienation*, which Talookdaree lands *are not*), and bearing on its face the probability that it was a rent-free grant of the Mahomedan Government, should be identified in its treatment with the Wanta in Khalsa villages.

26. It is in this latter aspect that Wanta is a privileged holding, as compared with Talookdaree estates. The owners of these estates were, from the first, heavily taxed, just as the owners of other property were taxed. The holders of *alienations* were exempted, according to their contract with the Government. As to ownership, I consider that the right of ownership in the best class of Talookdaree estate is quite as good as that in any Wanta, and the origin of it much more worthy of respect. As the land tax on them only became a special tax when the British Government abandoned the corresponding and equally heavy taxes on the trading part of the population, there was not in them even that limitation of ownership which in Wanta is constituted by the reservation of a rent-charge by the State (Sulamee).

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## RULES MADE BY THE GOVERNOR IN COUNCIL UNDER SECTION VI. FOR CARRYING OUT ACT VI. OF 1862.

The Officer or Officers who are to be appointed under Section I. of the Act shall prepare the scheme mentioned in Section X. of the Act in the following manner :—

1. The Officer or Officers shall ascertain the principal sum originally lent by each of the creditors severally, and this sum with 9 per cent. per annum simple Interest from the time when the debt was incurred up to the date on which the declaration provided for in Section I of the Act shall be made, and no further, shall in each case be the amount awarded, but subject to the following conditions :—

I. The amount of Interest shall in no case exceed that of the principal.

II. The heir in the second generation of the person who originally incurred the debt to pay the principal only. and no Interest.

III. The amount assigned in settlement of bonds held for services rendered by the creditor, to be determined by the Settling Officer after hearing evidence of the service in question.

IV. No Interest to be allowed on debts where accounts to the satisfaction of the Settling Officer are not produced.

V. When the first principal is not satisfactorily proved, a deduction of 50 per cent. to be made from the amount of the debt as it stands at the first stage at which satisfactory proof of the existence of the debt is given.

VI. When no accounts are produced the claim shall be disallowed, unless the debtor acknowledges the receipt of a sum in cash, in which case that sum shall be treated as the principal of the debt, but no interest shall be allowed.

VII. Interest not to be allowed on account debts in the absence of any specification that it shall be allowed.

2. All payments made by the Talookdar to any creditor, or profits which have been enjoyed by such creditor, towards the liquidation of any debt or liability before the settlement under the Act, shall be deducted from the principal sum of the said debt or liability, and



interest on an amount equal to such deducted sum shall be disallowed from the time of such payment or enjoyment ; and the Settling Officer shall be competent to decide on the amount of profits realized under such enjoyment, after examining such proofs as are presented to him.

3. Whenever a bond, a decree, or other claim, has been transferred by sale, gift, or otherwise, from the original holder to any other person, the present holder shall be called upon to support his claim by the same proofs as if he were the original holder.

4. When profits or income arising from a Talookdar's estate have been divided into shares, and it has been customary to consider each share separately liable for the debts of the proprietor of that share, a separate settlement shall be made of the debts of each sharer, instead of for the whole estate.

5. All admitted debts shall be satisfied in the order of seniority as they were incurred, except that money lent on the security of the estate shall be first repaid. Bonded debts also shall be satisfied before book accounts.

6. If the principal of all the debts, with simple interest at 9 per cent., shall exceed the amount which may be estimated to be available for the settlement of the creditors' claims, as provided for in Section VII. of the Act, during the period the estate shall be under management, then no interest shall be allowed on such debts as were not incurred by the present Talookdar. If the amount is then still in excess of the aforesaid amount, the rate of interest to be awarded on the remaining debts shall be decreased until their amount falls within the required limit.

7. In deciding what claims are admissible for settlement, and to what amount they shall be admitted, it shall be competent to the Settling Officer to appoint a Committee of experienced Natives, consisting of three persons, of whom one only shall be in the service of Government, to assist him, and it shall further be competent to the Settling Officer to reimburse the said Committee for their necessary expenses out of a percentage to be reserved on the rents and profits which the Settling Officer may receive to cover all charges arising directly from the special nature of his duties.

8. Provided, however, that if the creditors of any estate shall of themselves produce a Schedule of the original sums lent by them severally, signed by the debtor, and both parties shall consent to the

said Schedule in presence of the Settling Officer, it shall be competent to the said Officer to accept such Schedule without further investigation, and to make it the basis of his settlement.

9. During the period the estate may be under management, the Talookdar shall not, unless for special reasons to be reported to Government, be displaced from the internal management of his estate, but he shall, in regard to every thing relating to the said management, be subject to the supervision of the Settling Officer, who shall be fully authorized to take any steps which he may think advisable to ascertain and secure the full value of the yearly revenues of the estate or estates.

10. In the case of villages or lands held by superior Chiefs in virtue of mortgages or loan transactions, it shall be competent to the Settling Officer, with a view to avoiding undesirable agitation, to effect any compromise with regard to the possession of the village or the land which may meet the consent of both parties.

11. Where Wanta lands which may be admitted by Government to be held as transferable property which the holder may charge or alienate, shall be found to have been at the passing of this Act in the *bonâ fide* possession and enjoyment of any mortgagee in satisfaction of any claims secured upon such lands, such unsatisfied claims shall be satisfied in full from the rents and profits of such lands on which they are secured next after any claims of Government on the said lands, and such amount as shall be proved and established under the foregoing rules.

12. If the creditors shall agree to receive a sum of money from the Government Treasury in immediate satisfaction of all their claims on any estate, it shall be competent for the Officer appointed under Section 1 of the Act, with the sanction of Government, to order such payment, provided that the creditors shall first severally sign receipts in full for all their claims on the estate, and that if any fraud is subsequently discovered to have been committed by any creditor in respect to any money received by him under this rule, such creditor shall be liable to forfeit all sums so received, and all claim to further compensation for any debt due to him which may have been notified to the said Officer for satisfaction under this Act. And all sums advanced by Government under this rule shall be recovered from the estate, in the same manner as other debts due or liabilities incurred to the Crown or Government may be recovered under this Act.

13. The notification of any claim under Section VIII. of the said Act shall be understood to denote the statement of such claim before the Settlement Officer, accompanied by all such proofs and original documents required under the preceding rules, as it is the intention of the claimant to produce in support of the same. (Extra Rule sanctioned May 6th, 1863).

14. Advances made with the object of facilitating the settlement of the claims against any Talookdaree estate brought under the provisions of the said Act shall, when the Governor in Council shall so direct, be chargeable with interest at 5 per cent. per annum. (Extra Rule, Government Resolution No. 2080, June 2nd, 1864).

15. When the condition of an estate shall be found sufficiently prosperous, it shall be competent to the Governor in Council to make such further award beyond what is permitted by the previous rules, as the circumstances shall seem to warrant. (Extra Rule, Government Resolution No. 209, January 25th, 1865)

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No. 2252 of 1862

REVENUE DEPARTMENT.

To E. C. BAYLEY, Esq.;

Secretary to the Government of India.

SIR,—I am directed to acknowledge the receipt of Mr. Grey's letter, No. 2137, dated the 23rd April last, relative to the Bill "for the amelioration of the condition of Talookdars in the Ahmedabad Col-lectorate, and for their relief from debt"

2. In reply, I am desired to state that it is impossible to supply the information required by the Government of India in paragraph 1 without entering into some detail, and the following, with copies of the correspondence on the subject, may not be considered more than is requisite to make the objects and reasons for the Bill in question clearly understood.

Mr. Peile's report No. 62 of 20th July 1862, with accompaniments

Reply from the Revenue Commissioner N. D., No. 2728, of 13th December 1860

Mr. Peile's further report No. 10, of 22nd February 1861

*Statement of Objects and Reasons.*

The necessity of the present Bill was forced upon the Government of Bombay by the miserable condition of the Ahmedabad Talook-

dars, and of an important district, the actual cultivators of which are the tenants-at-will of the Talookdars. The Bill has taken its shape from the peculiar incidents of the Talookdar's history. These people are a Rajpoot yeomanry, all tracing their descent from one or other of five or six Hindoo Chiefs of some antiquity. The western districts of Ahmedabad are divided into numerous small properties, obtained by successive partitions, and now mostly consisting of but one or two villages. The Rajpoots on each such property number from about 50 to 200, the steadily expanding issue of the first holder. They arrogate the position of gentry, consider manual labour degrading, and simply receive and live on a traditional share of the crops handed to them by their tenants-at-will.

When the Mahrattas held these districts they annually sent armies to collect a money tribute from these Rajpoots. The Rajpoot and the Mahratta Government theoretically halved between them the landlord's share of the crops, the Government half share being commuted into a money payment at something under its full value. But as the Mahratta Officers always increased their levies wherever they could, whether from the superior Chiefs or from the petty yeomen, a fixed tribute was not the practice under their rule.

5. Following the policy of their predecessors, the first British Collectors, with ill-judged zeal, increased the demands of the State still further. The result has been that the properties have not improved, and these thriftless Rajpoot proprietors have fallen deeply into debt as a class careless and ignorant, although honest and well handed, they have during the last half century sunk deeper and deeper, and have become the victims of their own agents as well as their creditors, who both have equally made them their prey.

6. Circumstances still to be explained have, however, greatly complicated their position both as regards the Government and their creditors.

7. In the year 1821 the Honorable M. Elphinstone, regretting the heavy burden which, as above explained, had been laid upon the Rajpoots or Talookdars, sought, by fixing for periods of 5 or 7 years the amount of their tribute or Land Tax, to amend their condition, the object being to give them a prospective assurance that, during that period at least, the tax should not be increased upon them. It had long been the practice to take from the Talookdars yearly agreements to pay the tax placed upon them. The above assurance was henceforth embodied in these agreements, and gave them that

illusive resemblance to a lease which either misled subsequent Collectors, or tempted them to add clause after clause, the effect of which has been to annihilate the Talookdars' ancient proprietary rights, and convert them into mere lease-holders. The Talookdars had the alternative of either signing such leases as were laid before them or being ejected from possession, and, therefore, they did sign them, so that in the eye of the law by their own act their rights over, and interest in, their estates are now limited by their leases.

8. To the holders of such leases creditors have lent their money, but as many of the leases have expired and have not been renewed, and the rest have but a short time to run, and as the Talookdars as a general rule possess little or no property, the position of the creditors, it is not too much to say, is desperate.

9. The Government of Bombay, looking to the ancient status of these Talookdars, have long been anxious to restore them by reviving their ancient proprietary rights, and by remitting to them a portion of the taxation which has been laid upon them, wherever it may be proved to be heavy, but it is manifest that the object of Government would be entirely defeated were the estates released from the leasehold tenure on which they are now held, so long as the Talookdars are in debt, unless the release were accompanied with a legal declaration that the estates so released could not be held liable for the liquidation of the whole of the existing encumbrances.

10. The effect of the measure, if not accompanied by some declaration, would simply be to sacrifice the rights which Government now legally possess over the estates, and precipitate the ruin and extinction of the Talookdars for the benefit of the creditors, to whose hands the properties would at once and irretrievably pass, and to whom it would extend advantages which they hitherto have not possessed and have no right to expect, for the only available assets at present legally open to them consist of the temporary interest which the Talookdar possesses under his lease.

11. On the other hand, the proposed measure will secure to the creditors a much fuller and readier satisfaction of their claims than they can possibly effect under the existing state of things by calling in the Civil Courts to their aid. They will under the operation of the Bill in the majority of cases receive their principal and interest at the same rate within a moderate period, while previously the realizations frequently did not cover the bare expenses of the civil process.

12. In reply to paragraph 3 of Mr. Grey's letter, I am directed to state that the lands held by Talookdars are of two kinds only, viz., those held on Talookdaree tenure, and those which are known under the denomination of Wanta. These Wanta lands are insignificant appendages of the Talookdaree estates, and are appended to but a small proportion of the estates, and may be defined to be the residuum of a Talookdaree estate, for which immunity from taxation has been secured by giving up the other part of it to the governing power. Such compromises were common where Talookdars came into contact with the Moguls, and these Wanta lands have always been considered transferable property which the holder may charge or alienate. The Wanta lands are, therefore, such that the effect of Section 3 on the rights of third parties in them might be as contemplated in Mr. Grey's letter. But I am desired to observe that the Select Committee, after much discussion, and with a full knowledge of the nature of Wanta, recommended the extension of the provisions of the Bill to "Landed Estates of any description of tenure."

13. This course was adopted in order that an important end might be gained, viz., that there might be left no room for making reservations and exceptions in giving the Schedule of debts, and to prevent connivance between the Talookdars and any of his creditors to the injury and loss of others ; in fine, to secure all the assets of the estate being held available to the liquidation of the claims of *all* the creditors in accordance with the priority of their title to consideration.

14. The Governor in Council is competent, under Section VI. of the Act, to make Rules for carrying the Act into effect, and His Excellency in Council, I am to state, will insert into these Rules a clause providing that the claims of mortgagees who are found to have been in *bona fide* possession of Wanta lands, prior to the passing of this Bill, shall be satisfied in full (next after any claims of Government) from the land on which they are secured.

15. The Bill, it will further be observed, contains a provision (Section VII.) for the sale of these Wanta lands in satisfaction of the claims of creditors, and it is anticipated that, with the aid of the Rules above adverted to, there will be no difficulty in inducing the Talookdar to consent to the sale of the encumbered Wanta, or as much of it as will pay off the mortgage. In fact, the Talookdar's consent will be a mere act of honesty under the provisions of the Bill, and may be made a condition of his receiving the benefits of it.

16. With respect to mortgages on the land described in the Preamble to the Bill, I am directed to observe that it will be apparent to His Lordship the Governor General in Council that such mortgages might easily take place while the leases above described are current, without justifying the belief that the land is "property which the Talookdar was able to alienate in satisfaction of his debts," and that this Government have no doubt of the legality of ousting on the termination of the leases the mortgagees who may be in possession in virtue of mortgages of lands held under such leases.

17. In conclusion, I am desired to point out that as the powers for the relief of the Talookdars are entirely vested by the Bill in Government, and as it is not competent to any interested party to demand that a creditor shall be ousted out of possession of any Talook lands that may have been mortgaged to him, it was not considered dangerous to make the powers somewhat large, for it is fully as much the interest of Government to protect and relieve the important class of creditors as of the Talookdars themselves.

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No. 3756 of 1862.

REVENUE DEPARTMENT.

To E. C. BAILEY, Esq.,

Secretary to the Government of India.

SIR,—I am directed to acknowledge the receipt of your letter No. 4740, dated 1st ultimo, forwarding a copy of the Despatch from the Right Honorable the Viceroy and Governor General of India No. 14, of the same date, stating the grounds on which His Excellency has assented to the "Bill for the amelioration of the condition of Talookdars in the Ahmedabad Collectorate, and for their relief from debt," passed by the Legislative Council of this Government, and I am desired, with the view of removing the doubts which appear to exist in the mind of His Excellency the Governor General as to the necessity for the measure, to submit the following observations and remarks.

2. In the first place, I am to state that some misapprehension seems to have arisen as to the objects of the Act and the status of the

class of proprietors to whom it refers, by the erroneous application to them of the term Talookdar in the sense which the word bears in the North-West Provinces. It was carefully explained that the word Talookdar, as used in that sense, was a misnomer as applied to the objects of this Act, but this has apparently been overlooked. The Talookdars of Guzerat all call themselves Gametees, Grassias, and more frequently still Bhomeas, all which names indicate very ancient family possession. These proprietors are the direct issue of one Cadet of some Rajpoot Gadce. or Sovereign Chief, to whom two or three villages were given for support, a reversionary right to those villages being retained by the chief or head of the class on the extinction of the Cadet's issue. The Gadcees, or chiefships, (such as Bhowauggur, Limree, Khote, Gaumph, Gangur) from which they have sprung, although somewhat curtailed in territorial possessions, still exist, and are recognized by the Gametees or Grassias as their natural head. The proprietary right of these Gametees, Grassias, or Bhomeas, is, therefore, as towards the public or State as complete as possible, but the name Talookdar as used in the North-West Provinces implies quite the reverse of a proprietary right. In that part of India it denotes merely a superior holder or chief, who, whilst settling his own State dues with the supreme authority, also settles for and represents a number of petty proprietors over whom he possesses a managing right. The use of the term Talookdar as applied to the Guzerat Grassias is, however, of such long standing that it could not well be now discarded.

It has been above stated that a prescriptive reversionary interest in the estates of his kinsmen belongs to the head of each family. Mr. Erskine, in the 4th paragraph of his note, expresses a doubt as to the existence of this right, and states that he does not feel sure that diligent enquiry might not make out a strong case on the other side, and show many open instances of transfers made in opposition to what he calls these alleged customary rules. It seems to have escaped Mr. Erskine, in his perusal of the reports which accompanied the letters from this Government, that several open instances of transfers may be found narrated therein, but the occasional violation by broken down men of the custom of their people is no argument for the wilful annihilation of their common law, which is as distinct as it is ancient. The argument in the 5th paragraph of Mr. Erskine's note states a case which, if he refers to the absolute sale of the estate, is hardly parallel to the one under consideration; if, however, he refers to mortgages only, no such argument was needed, for Mr. Peile, in paragraph 11 of his report No. 10, has shown that mortgages, not



being contrary to the common law, were by no means unusual, and could be quoted by scores. The case stated in paragraph 5 of a whole clan being reduced to a sole representative, is so very improbable that it can hardly be quoted as a substantial argument.

4. With regard to Mr Erskine's remarks as to the political objects and reasons of the Bill, I am desired to observe that the conduct of the Grassias under circumstances of very great trial and suffering has been almost uniformly good. Their loyalty has not been impaired, nor have they been led to break the peace toward their tormentors, but as the state of these men calls for remedial measures, and as the Government must help them or complete their ruin, it is certainly a question of some political gravity whether the State can safely, by declaring their estates (contrary to their common law) to be saleable and transferable, permit their creditors to strip them of all their property, and scatter a class of men of warlike race and character, penniless and reckless along the British frontier.

5. "The mistake which declared them to be merely leaseholder<sup>7</sup> has so far been a fortunate one that it has prevented the action of the Law Courts in opposition to the common law of these people, and has maintained them in possession of their estates, a circumstance which, no doubt, has greatly conducted to their loyalty and good behaviour above adverted to. But this Government feels that in correcting the mistake as to the tenure of these estates, which has grown up since 1821, the proprietary right of these Grassias should not be annihilated, whilst the claims of their creditors are entitled to consideration; therefore, that it is necessary to have resort to such special legislation as the present

6. With respect to the argument in paragraph 8th of Mr. Erskine's note, it has been shown, in the reports which have been forwarded to the Government of India, that by the ordinary action of the Courts the creditors have been paid actually almost nothing, and that the present scheme has for its object to give them more than they would get in the ordinary course

7. Mr. Erskine was probably unaware that in the case of Juska,

\* No. 34, dated 14th April 1860 (copy of a report\* regarding which is now for the first time forwarded to the Government of India,) and in that of Bapoo Meeya the Kusbatee, the Civil Courts were unable to secure to the creditors one single Rupee, and that all the debts secured on these Talookas, the leasehold tenure of

which was terminated at the will and pleasure of Government, have been left unsatisfied, and that the law has really no remedy for the creditors.

8. With respect to Mr. Erskine's 9th paragraph, it may be stated that the bulk of the old mortgages have taken place with Chiefs of the same race, such as those of Bhownuggur and Limree, and that all objectionable treatment of such mortgages will be obviated by the tenth of the Rules which have been drawn up in accordance with Section VI. of the Bill for the guidance of the Officer or Officers who may be appointed to carry out the measure. Copy of the Rules which were drawn up immediately after the Bill had passed the Local Council are herewith forwarded, from which His Excellency the Governor General in Council will perceive that it is the desire of this Government to carry out the measures in a manner which will give the fullest consideration to the claims of every one. The lease system, it has been above stated, began in 1821, and, excepting the mortgages to the Chiefs above referred to, His Excellency the Governor in Council believes that there are very few cases in which the estates had not been openly converted into tenancies at will before the mortgages were made. In Juska, for instance, only 7½ per cent. of the debts were of an earlier origin than the year 1838-39.

9. In paragraphs 11 to 14 of his note Mr. Erskine suggests what seems to him the least objectionable method of settling the claims of the creditors of these proprietary Grassias. This method is to prepare a complete schedule of the debts of all the estates, which are to be divided into those lightly and those irremediably involved. To the former a scheme like that of the present Act might be applied, whilst the latter would be sold in full satisfaction of all claims upon them.

10. The effect of this scheme, His Excellency in Council desires me to state, would be to admit the proprietary right of the Grassias, in order by ejecting such proprietors to satisfy debts which were secured only on a leasehold. This proceeding would be entirely opposed to the common law of the country, and an outrage on the ancestral customs of all Rajpootana. But, perhaps, Mr. Erskine's method of preparing the Schedules would render sales unnecessary, for if Hindoo heirs are by law to be freed from "liability to fathers' debts, not being specialty debts," there are many Grassias who would be free men in virtue of that very provision. But the common law of the Hindoos would be again violated by this provision, and it is, perhaps, not too much to assert that the Grassias would be reluctant

to claim a release which they could not deny to be dishonorable according to their own customs.

11. With respect to the observations made in the Despatch of His Excellency the Governor General, I am desired to explain that the character of leasehold has rather been recited in connection with these properties than fixed upon them in the Act, and in doing so the framers of the Bill had in view the opinions of successive legal advisers of this Government previously on record that the tenure was most nothing but leasehold. With regard to ousting mortgagees, has been explained that none would be actually ousted who did not deliberately enter on possession of lands then hold of leases which have since expired, or will expire next year. With respect to the restriction of the claims of creditors to twenty years' net produce, it is unnecessary to offer any remark, as the proposal that Government should advance ready money, or buy up all the debts, will obviate any necessity for enforcing this restriction, except when the creditors extraordinarily fraudulent or unreasonable. Such a mode of dealing with the question would have been before suggested, but owing to the financial difficulties of the State it has not hitherto been put forward.

12. With respect to the ruling of the Stamp law adverted to in paragraph 7 of His Excellency's Despatch, I am to state that it was that of the Zilla Judge, and has since been cancelled as erroneous; and in regard to the further remarks made in that paragraph relative to an amicable settlement of the creditors' claims against the Grassias, I am to add that the Grassias have no objection to such a course, but the difficulty lies with the creditors, and this cannot better be exemplified than by the case of the Jaska Talooka. Mr. Peile's report on the results of an attempt to arbitrate in which it is as above appended. In that case the State had acted on the opinion of its Law Officers, the leasehold was at an end, and the village managed as a Government village. The full survey rental, except a bare subsistence remitted to the original Grassia proprietors, was collected by the State, and the dues of the creditors were altogether lost. Yet these men utterly rejected an award of double their principal. It cannot be supposed that creditors in better circumstances would be more moderate, and even if some creditors were willing to accept arbitration, others might hold back, and the whole scheme might thus be disconcerted by a few dissentients.

13. On these grounds His Excellency in Council prefers the provisions of the Act which has been passed to any action which might

be attempted by a combined application of Regulation VII. and Regulation XXV. of 1827, and Act VIII. 1859.

14. If the Government are empowered to buy up the debts at a moderate price, few estates will be subjected to the more extreme provisions of the Act, and His Excellency in Council considers that the importance of finality and dispatch, which could not be attained by any alternative measures, cannot be over-estimated, not only as regards the parties more immediately concerned, but on the public ground of improvement to one of the most important agricultural districts in Guzerat.

15. With these observations and explanations before him, the Governor in Council trusts that the proposed measure may not appear to His Excellency the Governor General so extreme as it at present does; and feeling assured that it is calculated to confer a great benefit upon an important class of landholders without injury or the infliction of any loss upon their creditors which the action of existing laws would protect them from, His Excellency in Council proposes, I am to state, at once to give effect to the Bill.

16. In conclusion, I am instructed to request that you will move His Excellency in Council to sanction the addition to the Budget of the year of a supplementary grant to cover the expenses of the settlement. It is difficult, I am to state, at present to foresee what sum may be required during the present Budget year, but His Excellency in Council considers that 12,000 Rupees may be sufficient, as it is hardly probable, under the provisions of the Act, that any advances will be made for payment of debts before the 1st of April next. It will be more easy, after some experience has been acquired, to calculate the requirements of the ensuing year.

I have the honor to be, &c.,

A. D. ROBERTSON,

Acting Chief Secretary to Government.

*Bombay Castle, 11th October 1862.*

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No. 3975.

## REVENUE DEPARTMENT.

*Bombay Castle, 21st September 1863.*

Letter from the Revenue Commissioner N. D. No. 823A, dated 13th May 1865—  
Submitting, with his own observations and opinion, a communication from Mr. Peile, who suggests the propriety of seizing the opportunity of the Survey Settlement of all Talookdaree Estates not brought under the operation of Act VI. of 1862 to declare the nature of the Talookdar's title to their Estates to be proprietary.

**RESOLUTION.**—Mr. Peile has correctly assumed that it is the desire of Government to restore to the Grassia Talookdars the proprietary rights which have latterly merged in the leasehold tenure, and it has already been plainly declared that the recognition of these rights was deferred only until the Talookdars as a body were so far freed from encumbrances that the recognition would be a boon, and not an injury to them.

2. It was with this view ~~the intention~~ 20 of Bombay Act VI. of 1862 provided for the full recognition ~~of the right~~ on the expiration of the term required to liquidate the debts of an Estate and the only question now is as to the most fitting time for a similar recognition in respect to Estates which do not come under the operation of the Act.

3. His Excellency the Governor in Council ~~considers that the~~ Survey Settlement is beyond question the most appropriate time for the change. Mr. Peile in giving the agreements under the new settlement to the Talookdars will explain to them clearly the liabilities they incur with the privilege of proprietorship.

4. A formal enquiry, such as is suggested in Mr. Peile's 7th paragraph, is hardly necessary. Mr. Peile is authorized to consider this recognition as applicable to all Talookas, with the reservation that it is not to be applied to those Talookas in which Mr. Peile may have reason to believe that there is still unsatisfied a debt for the liquidation of which due provision has not been made. Mr. Peile will ascertain and report on these cases, if there be any such, before delivering the agreements, as His Excellency in Council desires the

delivery of agreements to be of itself sufficient proof of the recognition of proprietorship.

5. The third clause of the agreement may seem somewhat inconsistent with a complete proprietary right, but its provisions appear to be required for the good management of the Talookas and the security of the Talookdars themselves, and it should, therefore, be retained. The only alteration required to the lease is at the close. In substitution for the words "at the end of that period according to the good condition of your cultivators will be the favour of Government towards you" should be written the following—"At the end of that period the Talookas will remain in your possession as heretofore, subject to such revision of the Jumma as Government may deem proper."

6. In conceding this right Government would wish to guard, as far as possible, against the concession being turned to the disadvantage of the Talookdar. It is, therefore, laid down that a Talooka, or portion of a Talooka, is not to be sold for arrears of Jumma, except, as a last resource, to collect the Government dues, and that, when the present work of the Settlement Officer under Act VI. has been completed, no such sales shall be finally carried out, except with the previous sanction of the Revenue Commissioner.

7. There is also the danger of fraudulent sales through the Civil Courts, and to guard against such frauds by the greatest possible publicity the Governor in Council is pleased to direct that all sales of Talookdars' Estates, or portions thereof, in the Ahmedabad district shall be conducted by the Collector on the requisition of the Court under Section 248 of the Civil Procedure Code, and the Collector will then consider whether the provisions of Section 214 of the same Code shall be applied to stay the sale and satisfy the decrees by other means.

8. These precautions ought, in the opinion of Government, to give the Talookdars all the security they can reasonably claim.

H. E. JACOMB,  
Under Secretary to Government

*Statement of the Talookdars of the Ahmedabad Zilla showing  
Records, and the Area and Jumma of their estates as*

**I.—DHUN**

Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
1	Charun .....	Bela 3rd .....	Rama Bapoo, &c. ....
2	"	Bodana .....	Jessa Krushna, &c. ....
3	"	Charunkee .....	Kheta Bhima, &c. ....
4	"	Goria .....	} Ramrao Lakho, &c. ....
		Sumdiala .....	
5	Choorasuma .....	Akroo .....	Mughabhai Najeebhai, &c. ....
6	"	Bowliaree .....	Bhojee Rasabhai, &c. ....
7	"	Cher .....	Patabhai Jsumutsing, &c. ....
8	"	Devgana .....	Mooloobhai Waghabhai, &c. ....
9	"	Dholera Estate—	} Mooloobhai Mooloobhai .....
		Rahatulao .....	
		Bhemtulao .....	
		Moodce .....	
		Jankhee .....	
		Khoon .....	
		Mahdevpura .....	
		Mingulpur .....	
		Bhanghur .....	
10	"	Gamph Estate—	} Thakhore Raesingjee Nagjeeraaj of Gamph...
		Gamph .....	
		Pudana .....	
		Kasundra .....	
		Gorasoo .....	
		Rampuroo .....	
		Chokurree .....	
		Unkewalioo .....	
		Peepurioo .....	
11	"	Hebutpur .....	Jeewabhai Samutsing, &c. ....
12	"	Jhinjhur .....	Mooloobhai Poonjabhai, &c. ....
13	"	Jusha .....	Doongurjee Bhojee, &c. ....
14	"	Kadipur .....	Shoorsingjee Kakabhai, &c. ....
15	"	Khumidana .....	Patabhai Ujabhai, &c. ....
16	"	Khurud .....	} Dadabhai Verabhai, &c. ....
		Salasur .....	

*their estates, names and shares, as they stand in the Government ascertained and settled by the Survey of A. D. 1863.*

## DOOKA. \*

Number of Principal Shares.	Cultivable Area in Acres.			Jumma under the new Settlement 1863.	
	Cultivated.	Waste.	Total.	First year	Last year 1886 87.
5	6	7	8	9	10
8	1,288 31	213 0	1,501 3	333 0 0	488 0 0
1 Co.	1,941 5	414 25	2,255 30	381 0 0	562 0 0
2	2,187 13	324 19	2,511 32	461 0 0	675 0 0
1 Co. {	885 38	373 37	1,259 35	1,150 0 0	1,460 0 0
	2,244 9	484 36	2,729 5		
1 Co.	2,427 13	4,188 16	6,615 29	2,450 0 0	3,000 0 0
1 Co.	5,230 28	7,026 16	12,257 4	1,135 0 0	1,710 0 0
13	1,126 17	2,044 27	3,171 4	1,015 0 0	1,120 0 0
1 Co.	1,963 10	54 21	2,017 31	1,500 0 0	1,500 0 0
2 {	1,068 21	890 27	1,958 9	2,400 0 0	3,300 0 0
	956 32	180 25	1,136 0		
	901 11	1,367 13	2,268 24		
	4,019 16	4,019 16	4,019 16	2,800 0 0	3,700 0 0
	1,225 29	356 35	1,582 21		
	370 2	896 6	1,266 8		
1 {	764 35	1,039 4	1,803 39	9,825 0 0	9,825 0 0
	1,496 23	2,262 16	3,758 38		
	4,295 15	1,925 17	6,220 32		
	2,871 36	47 25	2,919 21		
	926 2	393 0	1,319 2		
	3,057 6	2,661 37	5,719 3		
1 Co.	1,791 11	653 12	2,446 23	565 0 0	825 0 0
	1,153 38	1,267 26	2,421 24		
	309 7	1,262 27	1,571 34		
	1,416 9	4,684 26	6,100 35		
9	2,410 21	216 22	2,627 3	2,100 0 0	2,535 0 0
8	3,048 28	264 30	3,313 18	2,400 0 0	3,000 0 0
8	1,649 4	1,499 38	3,149 2	1,000 0 0	1,301 0 0
1 Co.	1,735 10	506 16	2,241 26	158 8 0	158 8 0
7 {	3,704 84	4,088 6	7,793 0	1,537 0 0	2,250 0 0
	1,189 26	* 21 6	1,220 32	900 0 0	1,350 0 0



Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
17	Choorasuma.— <i>Continued.</i>	Koturua .....	} Wursajee Khorajee, &c. ....
		Bhulgamra .....	
18	"	Nubhoce .....	Mughabhai Nanjeebhai, &c. ....
19	"	Oochurree .....	Wunabhai Jethibhai, &c. ....
20	"	Panchee .....	} Bharabhai Hurreebhai, &c. ....
		Roopawutee .....	
21	"	Peeples .....	} Kursunsing Moolooobhai, &c. ....
		Booranpoor .....	
		Nuwagam .....	
		Venitulao .....	
		Mochitulao .....	
22	"	Peepul .....	Uloobhai Lakhabhai .....
23	"	Purburce .....	Meroobhai Rugabhai, &c. ....
24	"	Rajka .....	Deepsingjee Umursing, &c. ....
25	"	Teemla .....	Bhimjee Kantabhai, &c. ....
26	"	Tugdee .....	Moolooobhai Nanabhai, &c. ....
27	"	Unialee Bhimjee .....	Umursingjee, &c. ....
28	"	Wagud .....	} Rasabhai Mughabhai, &c. ....
		Peepralee .....	
		Moresioo .....	
		Sumdiala .....	
29	Gosace .....	Beemnath Estate— Jhurwuloo .....	} Mahmut Ishwarghur Boodghur of Bheem- nath. ....
		Khudauloo .....	
		Ranpuree .....	
		Shahpur .....	
30	Jhala .....	Charoria .....	Mughabhai Jethibhai, &c. ....
31	"	Chusiana .....	Wursabhai Sanghabhai, &c. ....
32	"	Fedra .....	Phuljee Mudarsing, &c. ....
33	"	Jhanjhurka .....	Devising Khorabhai, &c. ....
34	"	Jalioo .....	Rughabhai Jeebhai, &c. ....
35	"	Khurool Estate— Khurool .....	} ....
		Khambra .....	
		Godawuta .....	
		Chachria .....	
		Dhadodur .....	
		Barwala .....	
		Mangulpur .....	

Number of Principal Shares.	Cultivable Area in Acres.			Jumma under the new Settlement 1868.	
	Cultivated.	Waste.	Total.	First year.	Last year 1866-67.
5	6	7	8	9	10
4	1,376 13 727 5	81 11 29 30	1,457 24 756 35	1,050 0 0 .....	1,250 0 0 .....
1 Co.	752 39	32 0	784 39	608 0 0	634 0 0
2	4,257 7	24 12	4,281 19	1,375 0 0	2,015 0 0
2	927 39 .....	1,327 13 889 0	2,255 12 889 0	329 0 0	481 0 0
2	3,836 35 1,026 0 857 8 ..... .....	1,335 34 2,477 16 632 15 ..... .....	5,172 29 3,503 16 1,489 23 ..... .....		
1 Co.	1,548 6	425 29	1,973 35	1,308 0 0	1,593 0 0
2	1,299 29	834 11	2,134 0	1,000 0 0	1,230 0 0
3	6,028 30	1,652 33	7,681 23	5,650 0 0	7,450 0 0
1 Co.	354 3	127 20	481 23	118 0 0	175 0 0
6	2,668 22	39 8	2,707 30	2,200 0 0	2,500 0 0
5	3,186 29	162 34	3,349 23	3,250 0 0	3,250 0 0
8	3,801 28 838 14 931 31 554 21	670 14 96 38 38 22 32 31	3,971 36 926 12 970 13 587 12	2,500 0 0 610 0 0 830 0 0 435 0 0	3,350 0 0 610 0 0 858 0 0 462 0 0
	No detail. No detail. No detail.		273 35 923 9 1,022 39	Inamco.	
	1,078 3	205 16	1,283 19		
1 Co.	1,493 12	80 9	1,573 21	1,683 0 0	1,963 0 0
2	3,076 10	92 33	3,168 33	1,332 0 0	1,950 0 0
9	3,751 7	3,172 0	6,923 7	2,000 0 0	2,900 0 0
3	2,172 2	34 25	2,206 27	1,725 0 0	1,915 0 0
6	1,847 29	73 39	1,921 28	2,025 0 0	2,025 0 0

Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
		Rephra ..... Wuhia ..... Surwal ..... Koondul ..... Goonda ..... Chundurwa ..... Jalila ..... Panchtulaorce ..... Barejra ..... Rojid ..... Rampura ..... Wejulka ..... Soondriana ..... Ulao ..... Panvee ..... Kaprialee ..... Wadhola ..... Waydee Nance ..... Salungpur 3rd ..... Bela 3rd .....	Thakore Juswutsingjee Futeasingjee of Limree. [A Second Class Chief of Jhalawar under the Kathcewar Agency.]
36	Jhala.— <i>Continued.</i>	Khusta .....	Thakore Bunesing Juswutsing of Wankaneer. [A Second Class Chief of Jhalawar under the Kathcewar Agency.]
37	"	Nagnesh Estate— Keria ..... Chapurkoo Motoo..... Chapurkoo Nanoo..... Boria ..... Malunpur ..... Shekpur ..... Waydee Motee ..... Boorania.....	Thakore Rajsingjee Jalumsingjee of Wud- wan. [A Second Class Chief of Jhalawar under the Kathcewar Agency.]
38	"	Raeka .....	Phuljee Mudarsing, &c. ....
39	"	Tradia Mota .....	Kunoobhai Wursabhai, &c. ....
40	"	Tradia Nana.....	Ubhesing Asajee, &c. ....
41	"	Udwal .....	Bhimjee Nuthoobhai .....
42	"	Wasna .....	Thakore Juswutsing Futesing of Limree .....
43	Kathee .....	Bhudla .....	Nagdan Bhoka, &c. ....
44	"	Bugud .....	Desa Jesa, &c. ....
45	"	Gungajul .....	Rama Dasa, &c.,.....
	"	Hurnia ..... Ninama .....	} Nag Selar, &c.,.....

Number of Principal Shares.	Cultivable Area in Acres.			Jumma under the new Settlement 1868.	
	Cultivated.	Waste.	Total.	First year.	Last year 1886-87.
5	6	7	8	9	10
1	Not known.		1,02,977 0	* 15,448 0 11	15,448 0 11
.....	1,896 29	453 35	2,350 24		
.....	644 15	106 20	750 35		
1	4,500 0	109 32	4,609 32	2,250 0 0	3,225 0 0
}	9,650 0	2,463 22	12,113 22	5,437 0 0	7,765 0 0
	1,137 3	93 3	1,230 6		
4	1,855 13	769 31	2,625 4	2,000 0 0	2,375 0 0
10	2,431 20	1,321 3	3,752 23	800 0 0	1,210 0 0
2	1,873 39	211 24	1,585 23	257 0 0	375 0 0
14	5,794 1	785 26	6,579 27	4,050 0 0	5,025 0 0
1	900 0	394 29	1,239 29	616 0 0	900 0 0
1 Co.	1,568 32	101 6	1,669 38	925 0 0	1,120 0 0
1 Co.	2,926 37	31 23	2,958 20	2,750 0 0	2,750 0 0
1 Co.	579 8	230 22	809 30	250 0 0	250 0 0
1 Co. {	438 22	968 5	1,406 27	205 0 0	300 0 0
	1,354 1	1,128 14	2,482 15	565 0 0	825 0 0

\* Fixed Jumma sanctioned by Government on the 28th May 1821.

Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
47	Kathee,— <i>Continued.</i>	Khus .....	Chomla Mooloo, &c. ....
48	"	Koondlee .....	Chomla Naja, &c. ....
49	"	Matra Nana .....	Desa Fukira, &c. ....
50	"	Nagurka .....	{ Soorung Alia, &c. ....
		Loia .....	
		Chorvira .....	
51	"	Nolee .....	Vela Matra, &c. ....
52	"	Nudala .....	Rana Loonvir, &c. ....
53	"	Oree .....	Hursoor Bhoem .....
54	"	Sangjee .....	Loona Umra, &c. ....
55	"	Sekhrud .....	Jetsoor Jeeva, &c. ....
56	"	Uniallee Kathce .....	Hathia Selar, &c. ....
57	Kusbatee .....	Alumpur .....	{ Alumbhai Samameia, &c. ....
		Sangunpur .....	
		Dharpeepia .....	
		Hasulpur .....	
		Khojapura ½ .....	
58	"	Boobawaw .....	{ Rehombhai Mejeebhai, &c. ....
		Uniallee Kusbatee .....	
59	"	Derdee .....	Hurbhumjee Lakhajee, &c. ....
60	"	Dewlia .....	{ Sabdeebhai Mudafurbhai, &c. ....
		Rajpura .....	
		Khojapura ½ .....	
61	"	Gulsana .....	{ Hutheebhai Muchoobhai, &c. ....
		Keria .....	
		Kinara .....	
62	"	Hurumtala .....	Poonjabhai Khalukbhai and Morjee Ubasee.
63	"	Khokurnes .....	Virajee Doodabhai and Poonjabhai Khalukbhai.
64	Mussulman .....	Gudhia .....	Tank Wuleebhai Nuthoobhai .....
65	"	Navuda .....	{ Meena Shree Luteefkhan W. Mumud Khan of Dholka.
		Panvee .....	
66	"	Sarungpur ½ .....	Purmar Sher Meia Mulek Meia of Dholka....

Number of Principal Shares.	Cultivable Area in Acres.			Jumma under the new Settlement 1868.	
	Cultivated.	Waste.	Total.	First year.	Last year 1866-67.
5	6	7	8	9	10
1 Co.	4,756 33	6 39	4,763 32	5,050 0 0	5,050 0 0
1 Co.	2,190 36	631 18	2,822 14	769 0 0	1,125 0 0
1 Co.	543 10	559 6	1,102 16	201 0 0	327 0 0
1 Co.	5,433 36	1,153 35	6,587 31	3,465 0 0	3,465 0 0
	1,881 22	795 8	2,676 30	1,128 0 0	1,474 0 0
	1,197 83	126 27	1,324 20	282 0 0	415 0 0
1 Co.	3,482 7	1,756 9	5,238 16	2,055 0 0	2,800 0 0
3	3,426 4	3,182 6	6,608 10	1,425 0 0	1,800 0 0
1 Co.	2,040 9	553 32	2,593 41	309 0 0	450 0 0
1 Co.	1,144 27	238 23	1,383 10	41 0 0	690 0 0
1 Co.	706 11	116 18	822 29	165 0 0	240 0 0
1 Co.	1,464 31	857 24	2,322 15	490 0 0	700 0 0
1 Co.	2,261 33	138 11	2,400 44	388 7 0	388 7 0
	1,176 27	58 7	1,234 34	608 0 0	631 0 0
	2,176 36	2 21	2,178 57	2,370 0 0	2,370 0 0
	1,253 23	111 0	1,364 23	139 0 0	205 0 0
	448 16	266 5	714 21		
1 Co.	1,410 36	93 19	1,504 15	775 0 0	1,050 0 0
	1,411 6	77 12	1,488 18	950 0 0	1,225 0 0
1 Co.	546 9	21 32	568 1	250 0 0	290 0 0
1 Co.	3,178 19	180 16	3,358 35	1,435 0 0	2,100 0 0
	2,129 15	156 29	2,286 4	820 0 0	1,200 0 0
Common with Dharpepla Estate.				.....	.....
1 Co.	2,570 20	74 4	2,644 24	2,300 0 0	2,675 0 0
	1,567 38	13 36	1,581 34	1,245 0 0	1,625 0 0
	1,150 34	48 35	1,199 29	680 0 0	775 0 0
2	1,191 7	104 17	1,295 24	1,145 0 0	1,145 0 0
2	2,650 28	285 17	2,936 5	1,750 0 0	2,350 0 0
1	1,078 34	111 7	1,190 1	350 0 0	500 0 0
1	4,025 0	5,058 20	9,083 20	6,100 0 0	7,525 0 0
	1,901 15	93 6	1,994 21	1,165 0 0	1,165 0 0
1	948 14	226 38	1,175 12	164 0 0	240 0 0

Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
67	Rawul .....	Mooldrace.....	Kusulsing Patabhai's widows.....
68	Waghela .....	Dhunala .....	Tukhutsing Jeebava, &c. ....
69	Shared Proprietary.	Kotura $\frac{1}{4}$ th .....	Peerjada Bhai Meia Jora Meia, &c. ....
		" $\frac{1}{4}$ th .....	Chorasuma Bharabhai Hurrebhai &c.....
70	"	Oomrala $\frac{1}{2}$ .....	Kusbatee Alumbhai Bura Meia, &c. ....
		" $\frac{1}{2}$ .....	Kathee Rana Rama of Paliad .....
71	"	Patna $\frac{1}{8}$ .....	Kusbatee Alumbhai Burra Meia, &c.....
		" $\frac{1}{8}$ .....	Jhala Raesingjee Jalumsing of Wudwan .....
72	"	Polarpur $\frac{1}{4}$ .....	Chorasuma Raesingjee Nagjeera of Gamph...
		Sangasur $\frac{1}{4}$ .....	Mahnut Ishwurghur Boodghur of Bheem-nath.

## ABSTRACT OF DHUNDOOKA.

	Acres.	Gts.		Villages.
1 Cultivated .....	19,668	38	1 Charun .....	4 $\frac{1}{2}$
2 Cultivable Waste .....	90,755		2 Chorasuma.....	48
3 Uncultivable Waste.....	1,71,825	22	3 Kathee .....	4
4 Detail unknown .....	1,08,263	...	4 Kusatee .....	45
5 Alienations.....	28,197	7	5 Kathee .....	17
			6 Kusbatee .....	15
			7 Mussulman.....	3 $\frac{1}{2}$
			8 Rawul.....	1
			9 Waghela.....	
			10 Shared Proprietary .....	5
	6,11,693	12		

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N. B.—The Limree (Jhala) Estate is only a late acquisition by ~~the State~~, and was originally the property of Chorasumas or Kathees who are still found in the villages as "Mool Gametees."

Villages marked in Column 5 as '1 Co.' are undivided villages of which the produce is shared by several members of one family.

Number of Principal Shares.	Cultivable Area in Acres.			Jumma under the new Settlement 1863.	
	Cultivated.	Waste.	Total.	First year.	Last year 1886-87
5	6	7	8	9	10
1	1,195 1	459 84	1,654 35	333 0 0	490 0 0
3	2,071 31	868 82	2,940 23	1,020 0 0	1,200 0 0
2	1,268 6	76 39	1,345 5	820 0 0	1,200 0 0
2	3,855 4	201 8	4,056 12	1,625 0 0	1,900 0 0
2	1,338 21	321 8	1,659 24	850 0 0	1,110 0 0
2	Not known		3,065 7	.....	.....
2	1,349 26	2,310 15	3,660 1	531 0 0	780 0 0
			Total.....Rs.	1,45,382 15 11	1,73,948 15 11



## II.—DHOL

Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
1	Wagheela .....	Boroo Motee..... Metal .....	Bhowsingjee Bapabhai .....
2	"	Bukrana .....	Jethibhai Rughabhai, &c. ....
		Bawa ..	Kunarsing Rajabhai, &c. ....
		Govinda .....	Dosabhai Visabhai, &c. ....
3	"	Chubasur ..	Bawajee Mudarsing, &c. ....
4	"	Dingunda .....	Ubhesing Wujesing, &c. ....
		Chokla .....	
		Kampura .....	
5	"	Boomalee .....	Uloobhai Morjee, &c. ....
6	"	Begwala .....	Thakore Gugooba Ubhesing of Gangur .....
		Bhoomkhee .....	
		Bhoomlee .....	
		Dhedhal .....	
		Seyal .....	
		Rugodra .....	
		Bhamsra .....	
		Roka .....	
		Chiada .....	
		Goondapura .....	
7	"	Ganol.....	Hurecsing Tejpal, &c. ....
8	"	Godhavee .....	Ujoobhai Dajee, &c. ....
9	"	Guroora.....	Chelabhai Ruwabhai, &c. ....
10	"	Kanetee .....	Bhawabhai Puchanjee, &c. ....
11	"	Khora .....	Sugramjee Morjee, &c. ....
12	"	Koondul .....	Wujesing Ladhajee, &c. ....
13	"	Koowar .....	Thakore Raacsingjee Singsing of Koowar.....
		Moreia .....	
14	"	Koth .....	Thakore Raacsingjee Singsing of Koowar.....
		Kallapura .....	
		Juwaraj .....	
		Goondee .....	
		Bholad .....	

KA.

Number of Principal Share.	Cultivable Area in Acres.			Jumma under the new Settlement 1868.	
	Cultivated	Waste.	Total.	First year.	Last year 1866-67.
5	6	7	8	9	10
1 Co	3,092 4 1,569 26	1,329 18 1,750 29	5,221 22 3,320 15	4,400 0 0	5,000 0 0
3	2,702 10 870 7 429 31	1,472 1 1,424 9 317 20	4,174 11 2,614 16 777 11	2,150 0 0	2,150 0 0
2	2,028 37	1,396 34	3,425 35	1,125 0 0	1,365 0 0
273	2,469 35 1,347 9 311 3	476 37 3,302 11 619 14	2,926 11 4,649 20 930 21	1,781 0 0	2,430 0 0
3	1,200 31	1,230 0	2,430 31	870 0 0	910 0 0
1	5,439 30 326 32 1,311 21 1,386 36 703 10 3,243 32 3,757 16 599 9 1,311 19 2,106 25 596 36	4,291 24 116 12 1,602 26 512 15 103 11 14,116 23 1,918 6 96 33 2,294 30 117 6 75 10	9,731 14 413 4 2,913 22 4,299 11 806 32 17,650 14 5,685 22 696 2 3,606 9 2,223 31 672 6	12,250 0 0	16,000 0 0
8	2,053 32	825 15	2,879 7	2,500 0 0	2,500 0 0
9	2,622 25	733 1	3,355 26	2,100 0 0	2,100 0 0
2	699 8	245 27	944 30	475 0 0	551 0 0
4	1,040 36	132 38	1,173 34	400 0 0	600 0 0
3	813 30	1,835 30	2,649 30	300 0 0	406 0 0
2	2,256 31	1,041 14	3,298 5	1,475 0 0	1,730 0 0
	503 33 1,665 12	2,244 3 1,800 34	2,747 36 2,966 6	2,450 0 0	3,675 0 0
	12,825 8 147 10 3,160 35 3,109 19 3,564 13	1,666 32 356 23 1,026 25 1,487 12 588 34	16,592 0 503 33 4,187 20 4,596 31 4,153 7		

Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
		Surungwala ..... Mutamun ..... Buldana ..... Dewudthul ..... Morasur ..... Goruj ..... Kolut ..... Telao ..... Kuliana ..... Soela ..... Devtee ..... Surco ..... Wartee ..... Fangdee ..... Nidhiad ..... Boha .....	Thakore Bhugwutsingjee Kurnsingjee of Koth and Sanund.
15	Waghela.— <i>Continued.</i>	Lekhamba .....	Gugobha Dajeeraj .....
16	"	Lodrial ..... Burora .....	Racsingjee Puchansingjee, &c. ....
17	"	Mukliwala ..... Melasna ..... Sumanee .....	Rajsingjee Mudarsing, &c. ....
18	"	Ootelia ..... Boroo Nance ..... Sela ..... Pulwara ..... Khicha ..... Huriala ..... Khurantee ..... Lolia 1 ..... Lolia 2 ..... Lolia 3 .....	[In dispute]. Subulsing Asahai, &c. ....
19	"	Umliala .....	Khimabhai Ladhabhai, &c. ....
20	"	Vichia ..... Kodalia .....	Urjunsing Ubhesing, &c. ....
21	"	Waootha .....	Ruwabhai Waghjee, &c. ....
22	"	Wasna Eawa .....	Subulsing Dosabhai, &c. ....
23	Rawul .....	Chundeesur .....	Malooobhai Hureebhai, &c. ....
24	Jhala .....	Mectapur .....	Thakore Juswutsingjee Futesingjee of Limree.
25	Kusbatce Purmar,	Kanetur ..... Nanodra ..... Adroa ..... Kesurdee .....	

Number of Principal Shares.	Cultivable Area in Acres.			Jumma under the new Settlement 1868.	
	Cultivated.	Wasto.	Total.	First year.	Last year 1866-67.
5	6	7	8	9	10
1	3,773 39	1,273 28	5,047 27	41,000 0 0	42,000 0 0
	4,835 31	774 5	5,609 36		
	1,472 27	1,570 39	3,043 26		
	999 26	343 21	1,343 7		
	958 10	2,480 20	3,438 39		
	1,354 23	2,529 32	3,884 15		
	1,284 16	388 18	1,672 34		
	1,152 32	291 25	1,444 17		
	846 35	1,407 12	2,254 7		
	795 17	475 22	1,270 39		
	549 15	697 4	1,247 19		
	593 26	419 0	1,012 26		
	506 12	1,057 27	1,563 39		
	513 4	1,467 22	1,980 26		
	1,254 7	1,224 5	2,478 12		
1	1,129 16	902 21	2,031 37	2 0 0	262 0 0
	234 11	738 11	972 22		
3	863 0	530 2	1,393 2	1,000 0 0	1,000 0 0
	1,602 0	82 39	1,684 39	2,000 0 0	2,000 0 0
2	4,040 32	1,331 10	5,373 2	2,661 0 0	3,841 0 0
	1,683 32	429 15	2,112 47		
	1,353 15	321 38	1,674 53		
	2,428 28	2,375 15	3,804 3	8,187 0 0	8,187 0 0
	3,305 13	554 27	3,860 0		
	1,623 17	171 37	1,795 14		
	373 5	592 35	966 0		
	333 28	481 13	815 1		
	1,198 9	178 5	1,376 14		
	472 15	1,070 1	1,542 16		
	2,770 26	1,632 14	4,403 0		
3	271 36	45 5	317 1	277 0 0	340 0 0
	726 31	2,123 14	2,850 5		
4	180 35	617 21	798 16	1,001 0 0	1,220 0 0
	280 3	4 38	285 1		
2	476 21	1,474 31	1,950 12	400 0 0	526 0 0
3	1,379 1	585 2	1,964 3	1,177 0 0	1,725 0 0
1	No detail.		17,049 0	Included in fixed Jumma of Khuroi Estate.	

Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
		Wasna Nanodra .....	Sher Meia Mulekmeia of Dholka .....
		Mence.....	
		Doorgee .....	
		Suria .....	
		Kewula .....	
		Dev Dholera .....	
		Sankod .....	
26	Kusbatee Mus-	Khatreepura.....	Uwzulkhan son of Sher Khan Dinameia ...
	sulman,	Bhetawara.....	
27	"	Nesra.....	Luteefkhan son of Mumudkhan of Dholka
		Nubhoe .....	
		Chiturwara.....	
		Reetia .....	
		Unipura.....	
		Vardce .....	
		Bagdana.....	
		Warna .....	

## ABSTRACT OF DOLKA.

	Acres.	Gts.		Villages.
1. Cultivated .....	1,39,465	1	1. Waghela Rajpoots .....	69
2. Cultivable Waste .....	98,101	21	2. Rawul Rajpoot .....	1
3. Uncultivable Waste.....	48,745	15	3. Jhala Rajpoot .....	1
4. Detail unknown .....	17,049	0	4. Kusbatee Purmar .....	11
5. Alienations.....	33,731	25	5. Kusbatee Mussulman .....	10
	<u>3,32,092</u>	<u>22</u>		<u>92</u>

*N. B.*—The Kusbatee Purmar Sher Khan has had eleven villages of his late uncle Bapoo Meia's Estate leased to him as a favour, on the term that he collects and pays over (minus expenses) the revenues of the lands already cultivated, and is to pay rent for the easily cultivable waste by degrees, while the less cultivable waste is at his disposal for the term of this lease viz., from A. D. 1864-64 to A. D. 1885-86.

Luteefkhan's Estate has been leased to him from 1864-65 to 1885-86 on the terms that he pays 70 per cent. of the survey assessment and is allowed to collect not more than twice the survey assessment.

Number of Principal Shares.	Cultivable Area in Acres.			Jumma under the new Settlement 1868.	
	Cultivated.	Waste.	Total.	First year.	Last year 1866-67.
5	6	7	8	9	10
1	3,693 16	7,084 9	20,777 25	19,950 0 0	23,700 0 0
1	242 16 276 21	197 10 198 20	439 26 475 1	{ Has been resumed by Government since 1866, the Kusbatee, a minor, being pensioned.	
1					
1	6,386 8	1,163 38	7,550 6	9,000 0 0	9,000 0 0
			Total.....Rs.	1,24,448 0 0	1,25,817 0 0

## III.—CHOOWAL OF

Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
1	Jhala.....	Derwala.....	Soorabhai Puthabhai, &c. ....
2	"	Dhanchee .....	Jeebawa Bhacejee, &c. ....
3	"	Modhwana .....	Umursing Puchanjeo .....
4	"	Tunmunia .....	Pragjee Bhawajee, &c. ....
5	Mussulman Mo- lesulaina.	Roonee .....	} Mulek Oomerkhan Meia Saheb, &c. ....
		Runode .....	
6	Thakurra Muk- wanas.	Bantaoe .....	Jeevajee Poonjajee, &c. ....
7	"	Dohsur.....	Masingjee Bunajee .....
8	"	Bhutaria .....	Malajee Jesajee, &c. ....
9	"	Dhana .....	} Kanajee Sangajee, &c. ....
		Jugpur .....	
10	"	Futeputra .....	..... Naroojee .....
11	"	Goonjala .....	Madhoojee Moonajee, &c. ....
12	"	Jethipura .....	Suwajee Pubajee, &c. ....
13	"	Jhanjburwa .....	Unajee Bhugoojee, &c. ....
14	"	Punar.....	Jesulsing Manajee, &c. ....
15	"	Rataee Motee .....	Jethajee Budhrajee, &c. ....
16	"	Rataee Nance .....	Poonjajee Gujajee, &c. ....
17	"	Seenuj .....	} Bahadurjee Tejjajee .....
		Kanpura .....	
		Anundpura .....	
18	"	Roodatul .....	} Jodhajee Jeetajee, &c. ....
		Mokapura .....	
		Puthapura .....	
		Rampura .....	
19	"	Soopura .....	} Ranajee Bhugwanjee .....
20	"	Soowala.....	
21	"	Telavce .....	Ramsingjee Koorberjee .....

## VEERUMGAUM.

Number of Principal Shares.	Cultivable Area in Acres.			Jumma under the new Settlement 1863.	
	Cultivated.	Waste.	Total.	First year.	Last year 1886-87.
5	6	7	8	9	10
4	4,486 28	558 6	5,044 34	1,001 0 0	1,500 0 0
2	2,248 36	211 28	2,460 24	485 0 0	728 0 0
1	1,580 21	60 29	1,641 10	280 0 0	420 0 0
5	2,671 0	323 1	2,994 1	500 0 0	750 0 0
4	1,147 24	596 31	1,744 15	125 0 0	160 0 0
	1,264 29	760 17	2,025 6	141 0 0	180 0 0
	713 12	12 4	725 16	425 0 0	425 0 0
1	812 18	119 19	931 37	475 0 0	475 0 0
1 Co.	618 27	114 32	733 19	300 0	300 0 0
3	2,209 38	1,333 0	3,542 38	0 0 0	845 0 0
	30 0	181 1	211 1		
1	453 19	74 24	528 3	175 0 0	215 0 0
2	2,083 0	196 7	2,279 7	650 0 0	815 0 0
2	515 35	58 22	574 17	280 0 0	280 0 0
2	1,072 38	552 12	1,625 10	361 0 0	451 0 0
2	628 30	4,415 29	5,044 19	300 0 0	450 0 0
1	885 17	.....	885 17	400 0 0	475 0 0
1 Co.	797 31	26 10	824 1	275 0 0	400 0 0
2	982 29	1,067 9	2,050 1	450 0 0	565 0 0
	1,127 32	.....	1,127 32		
	635 32	.....	635 32		
2	371 15	51 18	422 33	900 0 0	1,125 0 0
	1,173 19	245 20	1,418 39		
	330 25	20 36	351 21		
	494 36	73 8	568 4		
1	546 2	160 31	706 33	400 0 0	400 0 0
	1,245 33	47 7	1,292 0	1,000 0 0	1,000 0 0
1	967 32	118 26	1,086 18	500 0 0	500 0 0



Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
22	Thakurra Muk- wanas.— <i>Conti- nued.</i>	Ubasna .....	Dhunajee Hathijee .....
23	"	Umurpura .....	Maljee Jesajee .....
24	Thakurra Solun- kee:	Bhugapura .....	Himutsing Kesrising, &c.....
		Sehore $\frac{1}{2}$ .....	
		Guldhurpura $\frac{1}{2}$ .....	
		Balsasun $\frac{1}{2}$ .....	
25	"	Bhunkora .....	Wuktajee Ramajee..... Purtapsing Dosajee.....
		Ghutisana .....	
		Daslana .....	
		Koontia .....	
		Kanpura .....	
		Kanpura .....	
		Chonipura .....	
		Balsasun $\frac{1}{2}$ .....	
		Dangurwa $\frac{1}{2}$ .....	
		Rampura .....	
		Eendra .....	
		Kantrodee .....	
26	"	Chuniar .....	Kursunjee .....
		Kursunpura .....	
		Sehore $\frac{1}{2}$ .....	
		Guldhurpura $\frac{1}{2}$ .....	
		Wasna .....	
		Oogroj .....	
		Balsasun $\frac{1}{2}$ .....	Poonajee Kooberjee .....
			Danajee Sudajee .....
27	"	Dekawara .....	Puthoojee Jorajee .....
		Kurunpura Mota .....	
		Kurunpura Nana .....	
		Gumanpura .....	
		Subulpura .....	
		Ruttanpura .....	
		Oomedpura .....	
		Bhocenceepura .....	
		Bhocence .....	
		Juspura .....	
		Nudisala .....	
28	"	Kookwaw .....	Ruwayee Koombhajee .....
		Rajpura .....	
		Dangurwa $\frac{1}{2}$ .....	
		Sungpura .....	
		Bamrolee .....	
		Mudrisana .....	
		Hutheepura .....	
		Damodreepura .....	Ubhajee Rasajee .....
29	"	Ookurdee .....	Kesajee Unundajee.....
		Oogrojpur .....	
		Manpura .....	
		Raneepura .....	

Number of Principal Shares.	Cultivable Area in Acres.			Jumma under the new Settlement 1863.	
	Cultivated.	Waste.	Total.	First year.	Last year 1866-67.
5	6	7	8	9	10
1	1,143 23	86 39	1,230 22	600 0 0	600 0 0
3	601 15	39 36	641 11	275 0 0	350 0 0
1 Co.	2,209 32	790 6	2,999 38	450 0 0	565 0 0
	1,070 23	20 27	1,091 10		
	320 0	152 0	472 0		
	Common with Bunkora Estate.				
2	2,884 7	44 13	2,929 10	4,000 0 0	6,000 0 0
	609 1	265 30	874 31		
	2,295 8	354 35	2,650 3		
	566 15	565 18	1,131 33		
	288 16	27 31	316 7		
	3,201 10	526 14	3,727 24		
	233 32	33 8	267 0		
	1,560 39	260 9	1,821 8		
	Common with Kookwau Estate.				
	1,757 12	34 10	1,791 22		
3	1,661 22	268 17	1,929 39	1,800 0 0	2,250 0 0
	533 12	649 27	1,182 39		
	1,981 16	840 30	2,821 46		
	1,587 20	185 18	1,772 38		
Common with Bhugapura Estate.					
3	1,284 8	44 14	1,328 22	3,000 0 0	4,200 0 0
	1,572 12	423 10	1,995 22		
	Common with Bunkora Estate.				
	2,593 29	344 31	2,938 20		
	268 39	.....	268 39		
	450 34	.....	450 34		
	688 38	21 19	899 17		
	237 1	8 37	245 38		
	242 19	21 16	263 37		
	420 4	68 0	488 4		
6	147 0	47 35	194 35	3,225 0 0	3,225 0 0
	1,302 15	223 20	1,525 35		
	452 1	54 28	506 29		
	1,024 15	142 26	1,167 1		
	1,143 2	166 36	1,309 38		
	625 18	39 39	665 17		
	1,786 17	136 14	1,922 31		
	451 32	4 0	455 32		
	936 12	136 22	1,072 34		
	1,192 38	65 34	1,258 32		
1	766 14	56 10	822 24	500 0 0	625 0 0
	513 25	6 36	520 21		
	970 16	559 20	1,529 36		
	690 37	146 17	837 14		
1	658 3	212 33	870 36	500 0 0	625 0 0
	157 18	170 0	327 18		

Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
30	Thakurra Solunkee.—Continued.	Ughar .....	} Bechurjee Khorajee .....
		Sudatpura .....	
		Chunotea .....	
31	"	Vithlapur .....	Bechurjee Unundajee .....
32	Kusbatee Mussulmans.	Charodee .....	Futoo Meia Bapoobhai .....
33	"	Kachla .....	Bace Saheb .....
34	"	Leia .....	Bura Meia Hisamooddeen .....
35	"	Seahpur .....	Jusurkhan Jambhai .....
36	"	Thoree Hamba .....	Alumbhai Jambhai .....
37	"	Wung .....	} Bajjee Meia Dada Meia .....
		Thoree Mubarak .....	
		Thoree Wurgas .....	
38	"	Wunthul .....	Meia Saheb Futoo Meia .....

## ABSTRACT OF VEERCHAGAZ.

	Acres.	Goon.		Villages.
1. Cultivated .....	1,02,918	21	1. Jhalas .....	4
2. Cultivable Waste .....	30,599	34	2. Molesulams .....	2
3. Uncultivable Waste .....	20,838	35	3. Thakurra Mukwanas .....	24
4. Alienations .....	13,480	7	4. Thakurra Solunkhees .....	45
			* 5. Kusbatee Mussulmans .....	9
	1,67,837	17		84

\* These Kusbatees say that they came from Khorasan and got their villages in gift from the Waghela Kings of Puttun. They paid a Jumma calculated on produce to the Moguls. They were dispossessed by the Gaekwar in his second farm of Ahmedabad (A. D. 1804-1814) but reinstated by the Peshwa. In 1823, eight out of seventeen villages were resumed, and the rest are held only during the pleasure of Government,

Number of Principal Shares.	Cultivable Area in Acres.			Jumma under the new Settlement 1863.	
	Cultivated.	Waste.	Total.	First year.	Last year 1886-87.
5	6	7	8	9	10
1	3,416 15	214 6	3,630 21	1,600 0 0	2,000 0 0
1	2,150 39	226 27	2,377 26		
1	420 26	924 35	1,345 21		
3	3,626 22	1,475 16	5,101 38	500 0 0	750 0 0
2	671 35	1,370 30	2,042 25	151 0 0	Temporary.—The final settlement has not yet been made.
1	629 29	191 38	815 27	261 0 0	
2	1,250 26	1,411 28	2,662 14	1,000 0 0	
1	1,854 28	692 32	2,547 20	200 0 0	
2	1,678 39	1,058 16	2,737 15	200 0 0	
1	3,048 24	498 3	3,546 27	475 0 0	
	2,406 6	1,444 35	3,851 41	475 0 0	
	1,566 16	48 0	1,614 16	225 0 0	
1	1,665 12	1,083 25	2,748 37	161 0 0	
			Total.....Rs.	29,171 0 0	33,024 0 0

Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
1	Goel Rajpoot.....	Badhee .....	Sugabhai Mukabhai, &c.....
		Rajpura .....	
2	"	Bhojpura .....	Jethibhai Atabhai, &c. ....
3	"	Bhudlee .....	Jeebhai Jethibhai, &c. ....
4	"	Bhundar .....	Kusulsing Rajabhai .....
5	"	Bhuwaneeपुरा .....	Kumabhai Ruwabhai, &c. ....
6	"	Droopke .....	Bhimjee Visabhai .....
7	"	Jaloo .....	Sadabhai Jethibhai, &c. ....
8	"	Jaloo Nuwoo .....	Hunooabhai Mansing.....
9	"	Khambha .....	Humeerjee Wukabhai, &c. ....
10	"	Khambha Nana.....	Doodabhai Runmuljee .....
11	"	Kookud .....	Jethibhai Atabhai .....
		Kuntala .....	
		Gorialee .....	
		Gureelpura .....	
		Pethulpur .....	
12	"	Kooraa.....	Desaje Chuggunlal Sivpursad (Mortgagee)...
13	"	Kumlej .....	Thakore Meghrajee Pruthirajee of Wullah. [A third class Chief under the Katheewar Agency.]
		Oondvee .....	
		Bholad .....	
		Rubarika .....	
		Chaya .....	
14	"	Kunad .....	Jethijee Desuljee, &c .....
		Khareo .....	
		Shukwudur .....	
15	"	Kunkhote .....	Bhugwutsing Jalumsing .....
16	"	Lakuria .....	Khutabhai Jugtabhace, &c.....
		Anunpur .....	
17	"	Malpur .....	Wutabhai Nagjee, &c. ....
18	"	Mamsa .....	Kaloobhai Hamabhai .....
19	"	Morehund .....	Bhaecjee Raelmuljee, &c.....
20	"	Mulckwud .....	Ubhesing Waghabhai .....
21	"	Nuwagam Nana .....	Moteebhai Mawsing.....

GO.

Number of Municipal Shares.	Cultivable Area in Acres.			Junma under the new Settlement 1863.	
	Cultivated.	Waste.	Total.	First year.	Last year 1886-87.
5	6	7	8	9	10
2	1 626 28 780 10	159 4 138 37	1,785 32 919 7	425 0 0	668 0 0
4	810 7	381 12	1,191 19	500 0 0	575 0 0
3	947 24	922 3	1,869 27	160 0 0	240 0 0
1	289 8	825 18	1,114 26	75 0 0	112 0 0
1 Co.	369 15	599 36	969 11	225 0 0	225 0 0
1	507 18	717 26	1,085 4	75 0 0	112 0 0
3	350 39	958 2	1,309	85 0 0	129 0 0
1	544 8	721 16	1,265 24	61 0 0	90 0 0
2	637 2	794 6	1,431 8	155 0 0	232 0 0
2	1,233 5	1,293 35	2,527 0	575 0 0	625 0 0
3	1,550 36 423 11 728 16 985 27 435 36	572 1 245 31 863 7 163 19 140 5	669 5 1,591 23 1,149 6 576 1	1,595 0 0	1,705 0 0
1	1,389 8	121 12	1,510 20	200 0 0	300 0 0
1	1,096 23 762 26 229 7 380 13 395 11	3,933 3 1,139 13 50 0 10 4 29	5,029 26 1,901 39 279 7 711 23 862 8	1,450 0 0	1,825 0 0
4	2,084 26 1,235 21 1,554 33	1,424 30 111 10 58 7	3,509 16 1,346 31 1,612 39	625 0 0	938 0 0
1	781 24	198 25	980 9	250 0 0	375 0 0
2	1,474 30	1,190 4	2,664 34	550 0 0	660 0 0
2	1,486 0	279 23	1,765 23	500 0 0	720 0 0
1	473 29	56 0	529 29	120 0 0	180 0 0
3	2,002 35	1,323 24	3,326 19	835 0 0	1,075 0 0
3	470 28	156 37	627 20	180 0 0	195 0 0
2	877 20	619 27	1,497 7	235 0 0	352 0 0

Number.	Clan or Race.	Village.	Name of Proprietor.
1	2	3	4
22	Goel Rajpoot. <i>Continued.</i>	Nuwagam .....	Meroobhai Soojabhai, &c. ....
		Moglana .....	[Mortgaged to Bhownuggur].
23	"	Odurka .....	Patabhai Moolobhai .....
24	"	Ookurla .....	} Ugursingjee Hurbhumjee.....
		Trimbuck .....	
25	"	Paniala .....	Khoomansing Jethibhai .....
26	"	Peepurla .....	Poonjajee Hanoojee .....
27	"	Pudwa .....	Dadabhai Gujabhai .....
		Bhankhel .....	Purtapsing Moteelbai, &c. ....
28	"	Sampura .....	Godbhajee Desai .....
29	"	Sanodur .....	Surtanjee Bhakurjee.....
30	"	Sarnadur .....	Champraj Uloobhai .....
31	"	Sumdiala .....	Doodhabhai Runmuljee .....
32	"	Snr. ....	Mokajee Jusajee .....
33	"	Uwanca .....	Nathabhai Jusabhai .....
34	"	Walookur .....	} Kore Tukhtsingjee Lakhajee of Lathee... [A third class Chief of Goelwar under the Kathcewar Agency].
		Lakhunka .....	
		Neswud .....	
		Joonapadur .....	
35	"	Wavree .....	} Godurbhai Godbhai .....
		Tugree .....	
36	Bharote .....	Bhamunico .....	Jodha Ghela .....
37	"	Chuniala .....	Ghela Nuzbi .....

Number of Principal Squares.	Cultivable Area in Acres.			Jumma under the new Settlement 1863.	
	Cultivated.	Waste.	Total.	First year.	Last year 1866-67.
	6	7	8	9	10
3	767 16 1,076 16	1 11 74 16	768 27 1,150 32	777 0 0	1,155 0 0
2	964 8	616 43	1,611 1	300 0 0	450 0 0
1	2,182 22 590 33	265 5 16 4	2,447 27 606 37	1,250 0 0	1,510 0 0
2	449 0	756 26	1,205 26	120 0 0	180 0 0
2	296 20	1,508 31	1,805 11	150 0 0	150 0 0
5	1,455 28 515 20	484 31 907 38	1,940 19 1,453 18	450 0 0 290 0 0	610 0 0 325 0 0
3	2,566 13	2,060 36	4,627	300 0 0	450 0 0
3	645 34	410 16	1,086	270 0 0	400 0 0
2	259 38	1,330 13	1,590 11	150 0 0	0 0
1	309 8	230 9	539 17	95 0	112 0 0
3	3,122 11	169 1	3,291 12	1,315 0 0	1,930 0 0
1	2,928 27 674 28 412 12 362 23	1,410 3 206 15 118 15 608 8	4,338 30 891 3 530 27 970 31	3,000 0 0	3,000 0 0
1	2,867 30 1,201 15	1,494 7 130 18	4,361 37 1,331 33	1,425 0 0	2,075 0 0
1	325 16	1,073 37	1,399 13	75 0 0	112 0 0
3	663 17	16	1,132 33	105 0 0	158 0 0
			Total.....Rs.	20,398 0 0	25,624 0 0

## ABSTRACT OF GOGO.

	Acres.	Gts.
1. Cultivated .....	54,474	18
2. Cultivable Waste .....	85,133	4
3. Uncultivable Waste.....	25,501	10
4. Alienations.....	3,177	26
	<u>1,18,586</u>	<u>18</u>

	Villages.
1. Rawul Rajpoots.....	54
2. Bharote .....	2
	<u>56</u>



# ABSTRACT OF FOUR PURGUNNAS.

	Villages.
1. DHUNDHOOKA .....	144
2. DIHOLKA .....	52
3. VEBRUMGAM.....	84
4. GOGO.....	56
	<hr/>
	376
	<hr/>

*Statement of Wantas held by Talookdars in other than Talookdaree Villages.*

No.	Name of Wanta Holder.	Village.	Area.	Assessment.
<b>DHOLKA.</b>				
1	Thakore of Koth.....	Kuooka .....	300 27	470 8 0
2	Ditto .....	Nubhoce .....	42 33	72 8 0
3	Ditto .....	Kochuria .....	46 39	108 0 0
4	Ditto .....	Muflecpur .....	224 38	494 2 0
5	Ditto .....	Rajoda .....	768 9	1,424 12 0
6	Ditto .....	Sakodra .....	580 31	1,037 0 0
7	Ditto .....	.....	21 9	27 0 0
8	Ditto .....	Sankol .....	450 2	513 0 0
9	Ditto .....	Budunkha .....	437 27	1,197 8 0
10	Ditto .....	Roopal .....	22 9	569 12 0
11	Ditto .....	Sinnud .....	2,055 25	5,126 0 0
12	Ditto .....	Changodur .....	30 36	41 0 0
13	Ditto .....	.....	23 26	49 8 0
14	Ditto .....	Devtee (Bhatoni) .....	118 28	273 8 0
15	Ditto .....	Peeplun.....	122 8	171 0 0
16	Ditto .....	Maukol .....	Inamee. Detail not known.	
17	Ditto .....	.....	70 29	132 0 0
18	Ditto .....	Rinjha .....	28 15	31 8 0
19	Ditto .....	Wudala .....	3 16	18 0 0
20	Ditto .....	Kulolce .....	1,276 33	4,962 8 0
21	Ditto .....	Naika .....	1,727 27	9,044 12 0
22	Ditto .....	Muhijda .....	42 18	196 0 0
23	Ditto .....	Timba .....	47 6	169 8 0
24	Thakore of Koowar.....	Khurantee.....	746 31	1,236 8 0
25	Ditto .....	Durun .....	971 34	1,801 4 0
26	Thakore of Ootelia.....	Wasna (Nanodra) .....	598 25	1,265 8 0
27	Ditto .....	Oopurdul .....	319 17	213 8 0
Carried forward...				80,666 2 0

No.	Name of Wanta Holder.	Village.	Area.	Assessment.
		Brought over.....	.....	80,800
28	Thakore of Ootella .....	Matur... ..	88 29	120 0
29	Ditto .....	Sokhda .....	68 11	232 0
30	Ditto .....	Jetapur ... ..	249 32	name
31	Bukrana Talookdars .....	Dholeo.....	682 30	1,010 0
32	Ditto .....	Raepur .....	459 7	68 0
33	Sher Meia Muluk Meia .....	Sidhruy . . . . .	38 4	399 0
34	Ditto .....	Deo Dholea .....	308 7	296 0
35	Ditto .....	Sunla ... ..	117 34	124 0 0
36	Amhala Talookdars .....	.....	2	85 0 0
37	Ditto .....	..... (Wagsonnies) .....	376 3	5
38	Godhaver Talookdars .....	..... inipur .....	180 4	27 0
39	Ditto .....	Muktampur .....	27 10	158 0 0
40	.....	Mumudpur .....	13 24	34 0 0
41	Dhumala Talookdars .....	Matoda .....	373 9	1,076 8 0
42	Ditto .....	Vejulka .....	2,412 24	2,408 0 0
43	Doomalce Talookdars.....	Memur.....	711 29	787 0 0
44	Chubasur Talookdars.....	Vejee .....	313 2	202 8 0
45	Koondul Talookdars .....	Amboytee .....	100 36	161 0 0
46	Luteefkhan .....	Virdee .....	130 31	200 8 0
47	Ditto .....	Bhoolake .....	141 26	1,031 11 0
48	Thakore of Gangud.....	Bawla .....	1,251 25	2,084 8 0
49	Ditto .....	Tiansud.....	184 21	492 0 0
50	Ditto .....	Jhekda .....	€	Not ascertained.
<b>DHUNDOOKA.</b>				
1	Thakore of Gamph.....	Dhundooka .....	381 17	900 0 0
<b>VEERUMGAN.</b>				
2	Thakore of Pusar .....	Chorwurodra .....	794 14	807 12 0
3	Ditto .....	Meluj .....	552 21	764 0 0
<b>Total.....</b>			<b>28,926 33</b>	<b>45,764 8 5</b>

vicissitudes of seasons) on which the lands happened to be let out in the year preceding the Survey. In short, the rates have become so numerous and diversified, and the modifications applied to them so frequent, that I am satisfied the people have a very imperfect knowledge of the nature or amount of the rents they are called upon to pay."

19. The native officials were not slow in taking advantage of this confused state of the revenue management. Great part of the remissions allowed for failure of crops was systematically appropriated to their own use, whilst by their agency a system of unauthorized collections was generally introduced throughout the district. This latter practice is said to have been carried to such an extent that in many cases the unauthorized exceeded the authorized collections of the village.

20. The Revenue Commissioner quotes a case in which the unauthorized collections amounted to Rs. 357 against the Government demand of Rs. 137, and another of Rs. 789 against Rs. 255. Speaking generally of the state of things in respect to remissions and unauthorized collections, that officer says, "I firmly believe not one-half (the remission) has reached the ryots, and probably the portion of the actual collections that has been paid into the treasury has not been much greater."

21. About this time also a grievous system of torture for the realization of revenue had been secretly introduced. Rumours of its existence had reached the revenue officers of the collectorate, and, consequent on the receipt of petitions charging the native officials of the district with inflicting personal violence upon certain individuals in extorting revenue, Mr. Elphinston, the First Assistant, was deputed by the Collector to make a formal inquiry into the matter.

22. Owing, however, to the suppression of evidence by the district officials, and perhaps to some extent to want of tact on the part of Mr. Elphinston, the inquiry resulted in two Mousalee peons employed in the collection of revenue being criminally convicted of certain acts of torture and sentenced to a fine of 25 rupees each, or, in default, to suffer a month's imprisonment.

The Mamlutdar was declared to be honourably acquitted on a charge of extortion, whilst four individuals were committed for trial at the sessions for giving false evidence against him.

23. Shortly after this Mr. Goldsmid was appointed to the charge of Indapoor for revenue as well as for other duties. On complaints of this system of torture being brought to his notice, a searching inquiry was instituted, and after a lengthened investigation, conducted with Fouché-like skill and ability, he succeeded in bringing to light a system of disgraceful and cruel torture which was being practised upon the people of the district chiefly at the instigation of the Mamlutdar.

24. The record of these proceedings shows that twenty individuals, including the Mamlutdar and several district and village officials, were convicted of charges of torture, or of aiding and abetting the same, and sentenced to imprisonment for periods varying from one to seven years. The Mamlutdar's sentence was for nine years in the first instance, but it was afterwards commuted to seven.

25. Some of the acts of torture practised are reported to be too disgusting to record. But the following, extracted from the Judge's proceedings in the trial of the cases, are instances of brutal cruelty, such as it would scarcely be believed had been inflicted on human beings. In one instance a prisoner is charged with "forcing a man to stoop and hold his toes with pebbles under his feet, placing at the same time two stones, one on his neck and one on his loins, and compelling him to remain in the above position from morning until about midday." In another case the charge was "for compelling a man to stoop and hold his toes," and "having brought four pegs and a cord, commencing operations by tightening the same to fasten Crishnajee wullud Manajee (spread eagle fashion) to the pegs." And in another "for pulling down Mankajee by the ~~hair~~ of his hair from the raised ridge of earth near the Chowree of Bouree, beating him on the face, tearing his turban, and placing a stone on his head, and making him bear a stone on his head from daylight until 9 o'clock."

26. The following extract of the Judge's finding gives a full account of the circumstances of the case :—

“The eight cases of revenue abuses having been this day completed, the Assistant Judge proceeds to record the view he has taken of them severally. As, however, they were all caused by the same cause, they may be considered merely different parts of the same subject. A few general remarks therefore, embracing the whole case, will prevent the necessity of the same remarks upon each individual charge.

“Upon June 14th, 1834, Mr. Baber, who was then Collector of Poona, wrote to the Acting Mamlutdar of Indapoor, viz. prisoner Trimluck Gungadhur, and told him that there were outstanding balances in the district of Indapoor amounting to Rs. 23,870-15-1 which, upon the receipt of the order, he was immediately to recover; that he was now only acting Mamlutdar, but if he did so he should be confirmed in the situation; and that if he made any report that the people under him did not give him every assistance they should be dismissed.

“The Mamlutdar very properly wrote back to say that the ryots had had a hard year of it before, and Mr. John Burnett had accordingly allowed these balances to stand over, that the month of June was the worst month to come upon the ryots for payments. In fact the reply was in every respect most proper; it is dated (the Assistant Judge thinks) June 18th, 1834.

“This very proper remonstrance was never answered, and the Mamlutdar, actuated either by hope or fear, commenced the system of abuses which forms the subject of these trials.”

27. It is humiliating to find from these proceedings that the Judge considered the blame of these acts to be attributable in a great measure to the issue of an injudicious order by the Collector to the Mamlutdar, by which the latter's promotion was made dependent on his success in collecting the outstanding balances. This opinion seems to have been fully concurred in by Government, and thereupon instructions were issued to all Collectors,

enjoining them to take precautions to prevent the occurrence of such acts of cruelty.

28. But not content with the punishment of the perpetrators of these cruelties, Mr. Goldsmid made immediate inquiry as to the amount of revenue which had been extorted from the ryots by these proceedings. This resulted in his showing the sum of Rs. 8,863 to have been improperly levied, and he was at once permitted to refund it to the cultivators. The whole proceedings in the case will appear in the present day to be more like the incidents in a story culled from the pages of the Arabian Nights, rather than a chapter of events taken from the history of the revenue administration of the district.

29. There are still some civilians in the country who took part in these proceedings. The present Commissioner in Sind, Mr. Malsfield, was employed in Indapoor at the time, and the records show that he rendered good service in reforming the revenue administration of the district. There is also another distinguished officer who, in his early service, was associated with Mr. Goldsmid in his reformatory career in Indapoor, and who, after filling the highest position in the Civil Service, now presides over the Government of this Presidency.

30. The corrupt and demoralised state of the officials generally, combined with the confusion introduced into the accounts by the changes made in Mr. Pringle's assessment, told seriously upon the revenue of the district. Cultivation decreased, and notwithstanding remissions, the outstanding balances were annually being augmented. These facts will be made apparent by an examination of the following statement, which exhibits the Jum-mabundy, remissions, collections, and outstanding balances for the ten years preceding the advent of the settlement :—

Year.	Jumma bundy.	Remissions.	Revenue collected.	Balance outstanding.
1826-27	79,197	12,810	63,242	3,175
1827-28	68,324	41,917	22,015	4,372
1828-29	74,688	232	60,843	13,613
1829-30	1,05,705	....	21,297	84,408
1830-31	64,130	48,550	12,887	2,693
1831-32	73,200	52,124	20,803	273
1832-33	75,502	57,969	17,162	371
1833-34	83,079	...	61,080	21,989
1834-35	70,932	6,207	61,082	* 3,643
1835-36	71,550	12,162	62,187	201
Total....	7,69,307	2,32,001	4,02,568	1,34,738*
Ten years' Average....	76,930	23,200	40,256	...

31. On analysing this return we find that during the period referred to the revenue of the district had in one year fallen to the small sum of Rs. 12,887, and in another (1832-33) it amounted to only a little above Rs. 17,000. For the ten years the average collections are Rs. 40,256, and the average annual remission amounts to Rs. 23,200, whilst the outstanding balance at the close of the period was Rs. 1,34,738.

32. It was at this crisis, with the district half depopulated by the effects of mismanagement and the unscrupulous rapacity of native officials—with a falling revenue and annually decreasing cultivation—with heavy outstanding balances betokening the poverty of the people and the low state of its agricultural resources—that the late Mr. Goldsmid proceeded to inaugurate that system of survey settlement which has since formed the groundwork of the revenue administration of the entire Presidency.

33. It is interesting at the present time to notice the different schemes proposed. The first which assumed a definite shape.

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\* Of this outstanding balance only Rs. 34,867 was collected, the remaining sum of Rs. 99,871 being entirely remitted in 1838.



was to take the old "Chahoor" as the standard for fixing the rates of assessment. This proposal emanated from Lieutenant Shor-trede, who was employed at the time upon the duty of specially reporting upon Mr. Pringle's survey of the collectorate. "The kind of settlement," he explains, "which I would propose for the first year would be to let the best land at 60 rupees per Chahoor and the inferior at 50 or 40." This proposal was approved by the Revenue Commissioner, who, in submitting it to Government, observed as follows:—"By assessing the Chahoor the advantage of a ryotwar settlement would be secured to the people freed from the confusion in the accounts and facilities for abuse which appertain to the present system." The measure proposed may appear in the present day to have been somewhat crude, but if the state of the district at that period be considered, it would seem to be an improvement on the existing system of management, and in that light therefore the Revenue Commissioner's support of such a measure is accounted for. It afterwards received the sanction of Government, and orders were issued to carry out the plan as an experimental settlement for one year.

34. It is fortunate for Indapoor, and perhaps for the Presidency generally, that Mr. Goldsmid was entrusted with the duty of carrying out this measure. He foresaw at once the defects of such a plan of settlement, and lost no time in reporting against its adoption. The promptness indeed with which he addressed himself to the cancelment of the orders, and the substitution of a different system, is characteristic of that energy of purpose which he displayed throughout his official career. "Last night," he says "I had the honour of receiving your letter, \* \* \* directing me to take immediate steps for assessing the lands of Indapoor in the manner recommended by the Revenue Commissioner and sanctioned by Government;" and he then proceeds to explain his views upon the subject.

35. The chief defect of the proposed system, as explained by Mr. Goldsmid, is attributable to the circumstance of the "Chahoor" not being a definite measure of quantity. He also expresses some doubts "whether it was originally one of quality,"

or admitting that it were so, the integrity of the original divisions, he contends, was vitiated by the frauds practised in subdividing them into beegas. He then furnishes some practical illustrations of how unequal the assessment would be were it put upon the Chahoor.

36. Mr. Goldsmid next proceeds to explain that as the survey measurements of Indapoor Talooka have been found to be correct, they should form the basis of the new assessment. Being strongly impressed, however, with the desirability of retaining old names and denominations familiar to the cultivating classes (which indeed was one of the chief reasons given by the Revenue Commissioner for the adoption of the Chahoor) he considered it would be objectionable to adopt the acres, goontas, and annas of Mr. Pringle's measurement, and proposed therefore to convert them into beegas of the area of the Concan beega. This plan was approved of by Lieutenant Shortrede, and at his suggestion it was arranged that the new beega should be called the Pucka or Poona Beega.

37. The Collector and Revenue Commissioner approved of the abandonment of the Chahoor and the adoption of the acre as the basis of the new settlement. They disapproved, however, of the transmutation of the acre into beega as being no advantage, whilst it might have the effect of leading the cultivators to suppose that a new standard was about to be adopted. Government, concurring with the opinions of the two revenue officers, directed Mr. Pringle's measurements to be adopted, and they were accordingly utilised as the basis of the Indapoor settlement.

38. With regard to the assessment, Mr. Goldsmid proposed that in the first place every field should be gone over and its soil and situation carefully examined. With this and other statistical information before him he then proceeds to say, "I would arrange the Jerayet or unirrigated land in three classes—Ootum, Mudhum, and Kunist—and should thus be only following the course pursued with so much advantage by native governments in

other zillas. The land might, with reference to its class, be assessed according to either of the two scales noted in the margin. I should myself prefer the lower, as, with the higher remissions, I am convinced, would be often necessary in this talooka, where rain is so scarce." He proposed to try his plan experimentally in ten villages, and report the result to Government for confirmation, before informing the ryots of the rates. He also strongly urged that the settlement should be confirmed for ten years in place of one, as in the proposals regarding the adoption of the Chahoor.

39. These modifications of the original proposals submitted by Mr. Goldsmid were generally approved of by the Collector and Revenue Commissioner, both officers advocating the adoption of the lower of the two scales of rates proposed. The Collector also recorded his opinion, that the maximum rate should be fixed by Government, the apportionment of the remaining classes of rates being left to the settlement officer. This discussion regarding the rates of assessment is fully reviewed in the following extract of the Government letter on the subject:—

"On this head the Governor in Council accedes to the general opinion, that their determination must rest with the settling officer, and has no difficulty in confiding it to Mr. Goldsmid. The general principles by which he should be governed in fixing the amount to be levied, may very satisfactorily be collected from the correspondence under consideration \* \* \* The suggestion of Mr. Mills, that a maximum should be fixed by Government on the first soil of land, is the only one of that gentleman's valuable observations on this branch. The Governor in Council is inclined to dissent; there is no reason why Government should in any instance fetter the discretion of Mr. Goldsmid, whose means of judgment far exceed those of any other person, and who is perfectly able to avail himself of these means."

40. The imposition of an extra rate upon well garden lands formed part of Mr. Goldsmid's scheme. A lengthened correspondence occurred regarding the policy of this measure, the Revenue Commissioner supporting Mr. Goldsmid's view, and the Collector opposing it. Government, in passing their decision upon the question, observed thus :—"The arguments on which he (Mr. Goldsmid) grounds this proposal are, as you justly observe, very sensible, and they are further enforced by your authority, but it seems to have escaped your notice that Mr. Mills distinctly disapproves of the increase, and his reasoning in opposition to it is, in the Governor in Council's opinion, conclusive."

41. On receipt of these instructions Mr. Goldsmid was directed by the Revenue Commissioner to submit a further report upon the question of imposing an additional rate on garden land, and the inquiry resulted in his being permitted by Government to carry out his original plan. The taxation of well lands was not, however, first introduced by Mr. Goldsmid. It formed part of the old Maratha system of assessment and of Mr. Pringle's also. I shall have occasion hereafter to remark at length upon this subject, but it seems expedient to record in this place that the plan of assessing well garden lands had not its origin with the Deccan Survey Settlement.

42. There was an entire accord amongst the several officers concerned as to the advisability of adopting a decennial instead of an annual settlement, and Government in sanctioning the measure expressed their approval of it in the following terms :—

"On reconsidering this subject it occurs to the Governor in Council that the notion of an experimental settlement for a year involves a fallacy. The object of the experiment must be to ascertain, first, what is the average produce of the lands in cultivation; and next, how far the ryots may by liberal terms be induced to cultivate more extensively. But these objects no twelve-months' experiment could possibly accomplish. With respect to the first, it is manifest that no single

year can be relied on as a test of the *average annual* product of lands. With respect to the other, it is equally plain that no terms, however liberal, can lead to extended cultivation under a lease of a single year. In short, the benefits to be expected from a decennial settlement depend precisely on the length of the term, and therefore no shorter term can afford any sample or specimens of them. The decennial term will itself be the best and the only experiment.

“To agree with the ryot for a low rent and then to grant him only a year’s holding, is, as Mr. Goldsmid justly observes, to sacrifice revenue without attaining the object of encouraging cultivation.”

43. It will probably be thought that I have been somewhat prolix in my explanations and quotations bearing upon the question of the form of settlement proposed for adoption in Indapoor. But in regard to this I would observe that it has appeared to me that it would be impossible fully to appreciate the difficulties which the survey officers had to contend with in arriving at a judgment upon the point, unless all the circumstances that transpired are fully recapitulated. It has seemed equally desirable too that the views of the Government of the day upon the several proposals should be fully stated.

44. It will be seen from the foregoing remarks that the instructions committed to Mr. Goldsmid to carry out comprised the following points :—

1st.—That the measurements of Mr. Pringle’s survey were to form the basis of the assessment.

2nd.—That a minute classification of all the lands of each village was to be made.

3rd.—That he was empowered to fix the assessment rates of the district.

4th.—That the settlement was to be considered decennial.

45. Great latitude was allowed Mr. Goldsmid in carrying out these instructions, and the sequel will show that, in the

exercise of the discretionary power confided to him, considerable modifications were subsequently made in the plan originally proposed.

PART II.—*The introduction of the Settlement, and its results.*

46. As Mr. Goldsmid was about to enter upon the duties of carrying out the foregoing instructions, he was joined by Lieutenant Wingate, who had been appointed specially to aid in the proposed settlement: Lieutenant Wingate soon displayed that ability and those peculiar qualifications for revenue and survey duties which marked his subsequent career. His first report on Indapoor contains several suggestions for revenue reforms, many of which have subsequently been engrafted into our revenue administration system. His clear intellect and sound judgment, associated with Mr. Goldsmid's strong reformatory talents and energetic character, formed a combined measure of qualifications peculiarly well fitted for the important work entrusted to them.

47. They soon set themselves to work. What portion of the survey and assessment work was more particularly undertaken by each does not appear from the records of their proceedings; but it is evident that both worked well and cordially together, and the success of their operations may doubtless in a great measure be attributed to this.

48. I think it better to allow Messrs. Goldsmid and Wingate to give an account of their own proceedings, and have therefore extracted the following paragraphs from Lieutenant Wingate's report on the Indapoor settlement bearing upon this subject:—

“The accuracy of the measurement was tested by having a certain number of the fields of every village (marked off from the papers, by the European officers) re-measured by the carkoons of the establishment, whose work was subsequently tested by the surveying officer, and accuracy ensured by the prompt infliction of punishment upon occasion of error or negligence on their parts being brought to light. On the result of this investigation, should the survey measurements

have been executed with a tolerable degree of accuracy,\* they

were retained and corrected when necessary,  
 \* Within 10 per cent. of the truth. but when it appeared that the errors were beyond reasonable limits, and likely to vitiate

the assessment, the village was wholly re-measured. The necessity of making an entirely new classification of the soil, without reference to that executed at the time of the survey, was owing to the latter being made after no general standard; the particular classes of soil in one village (as described in the 77th paragraph of Lieutenant Shortrede's report) not corresponding with those bearing the same denomination in another, which must have increased greatly the difficulty of forming an effective check, if it did not render this altogether impracticable.

“In consequence of this defect in the survey classification, Mr. Goldsmid determined to reject it altogether and re-classify the whole pergunna upon one general system, having reference solely to the natural productive qualities of the soil, and leaving wholly out of consideration extrinsic circumstances, such as vicinity to the village, command of water, &c., which, although carefully noted with the view of finally assisting in fixing the assessment, were not permitted to affect the classification. By this means the elements of the classification were reduced to a consideration of the natural fertility of the soil alone, which rendered the work comparatively simple, and enabled the European officer, after acquiring some practical knowledge of the different descriptions of soil usually met with, to become an effective check upon the carkoons engaged in classifying the land.”

49. The villages of the Kullus Division were first brought under settlement in 1836 and the remaining part of the district the following year. There is still therefore another year of the 30 years' lease to run out in the latter case. It seems to be advisable to have the whole talooka brought under the revised rates at the same time. On this account, as well as for the other reasons which have been given in an official communication, I have deemed

it expedient to defer the re-settlement of the Kullus Division till next year, when the whole district will be brought under the revised rates at the same time.

50. The talooka comprised 76 \* Government villages in 1836.

\* Half of one village was, however, held in Inam. But two villages belonging to it, which were held in Inam at that time as belonging to the Deshmookhee of the Sattara Raja, have subsequently come under Government management, consequent on an exchange of lands made with the Raja, and were assessed in 1845. The half Inam village, which also formed part of the same Inam holding, has likewise been ceded, and was assessed also at the same time. In the early period therefore of the settlement lease and up to 1845 our revenue accounts will be for 74½ villages only.

51. But although the settlement was partially introduced in 1836, no report upon it was submitted to Government till 1838, or after a lapse of two years. During this interval the other part of the district had been also brought under the operation of the measure, and the result for the whole talooka was embodied in one report.

52. The original report was prepared by Lieutenant Nash, who was appointed to the Survey in 1836, and had taken part in the operations carried out in the principal, or Mamlutdar's, division of the talooka. His report is reviewed by Lieutenant Wingate and forwarded to the Collector, who submits the correspondence to the Revenue Commissioner with his opinion; and the latter transmits it to Government with his own remarks upon the whole question. Final orders upon the papers were eventually issued at the end of 1838, the letter being dated the 31st of December. All the correspondence referred to above is annexed, and will doubtless be read with interest, as showing the opinions of the day upon a measure which has since worked such great results.

53. According to Mr. Goldsmid's original proposals, the classification of soil was to be carried out upon the rough plan of having three or four classes, as followed in the old native plan of



classifying land. It was found, however, on attempting to apply such a system, that it would be far too rough to effect an equable distribution of assessment. Upon this therefore Messrs. Goldsmid and Wingate devised the plan of arranging the soils under three main divisions according to colour, each division being subdivided into three different grades or classes, thus making nine classes in all. A scale of values was assigned to the several classes thus formed, 12 annas being the highest and 2 the lowest rate.

54. The Collector and Revenue Commissioner concurring in the reasons given by the Survey officers for this modification of the proposals originally made, expressed their approval of the system of classification adopted; but Government, in reviewing this part of the operations, observe as follows:—"The rates of these nine classes are said to have been derived from local inquiry and the experience of qualified persons, without any very minute investigation into actual produce or actual expenditure. The applicability of such rates must entirely depend on the degrees in which the framers of them were qualified for the difficult and delicate task of preparing them. There is no test to which they can be subjected except that of experiment for a fair series of years." But, though considering the information on this point defective, Government nevertheless, with a generous confidence in the officers employed, did not hesitate in according their sanction to this part of the plan of operations.

55. It appears from the remarks upon this subject that Government did not exactly understand how the classification of the soil had been applied to the assessment of the land. They seemed to think that extrinsic circumstances affecting the value of land, such as roads, markets, &c., should have been combined with the classification valuations, and imagined that Messrs. Wingate and Nash had overlooked these considerations.

56. It is not surprising that there should at first have been some misunderstanding of the principles on which the Survey officers had proceeded; but as regards the point under discussion, Lieutenant Wingate had been careful in explaining that these

extrinsic circumstances, though disregarded in the classification, "have been carefully noted with the view of finally assisting in fixing the assessment." The misconception of the Survey officers' proceedings seems, however, to be attributable to the circumstance of Government not understanding that the value of these extrinsic circumstances was considered and adjusted by a subsequent process, viz. in the fixing of the rates, which *was then*, and *is still*, an operation apart from the classification of the soil.

57. The Collector, Mr. Mills, considered both the maximum and minimum rates to be extremely low compared with the Mamool rates, but at the same time expressed his opinion that they were as high as they ought to be, considering the depressed condition of the ryots. He then proceeds to argue that the present state of Indapoor is fictitious to a certain extent, as the low assessment had attracted ryots from neighbouring states and from our highly assessed districts. He contends therefore that as the same low rates of assessment become extended throughout the collectorate generally, the fugitive ryots will return to their paternal fields; consequently that the increase of cultivation which had taken place during the two years since the settlement was introduced is temporary only.

58. These objections were answered in part by the Revenue Commissioner, Mr. Williamson: "As to the state of the district being fictitious," he observes, "this is true in part, if Mr. Mills meant that it is flourishing in comparison with other districts." A complete *expose*, however, of the incorrectness of the Collector's statements is to be found in a report from Lieutenant Wingate, written subsequently to the issue of the orders on the settlement.

59. Referring to the extension of cultivation being said to be due to the influx of ryots from other districts, Lieutenant Wingate observes, "Were the greater part of the newly taken up land in Indapoor actually found to be the consequence of emigration, this would form no valid objection to the new settlements, but it would materially weaken our anticipation of like immediate benefits resulting from the extension of similar settle-

ments to other districts, and on this account the determination of the facts of the case becomes a question of importance. The information contained in the returns before me fortunately admits of this being done in the most conclusive manner, and it will prove a source of satisfaction to Honourable the the Governor to know that the now apparently flourishing condition of Indapoor is due to no adventitious circumstances peculiar to that talooka, but simply to the reduction and equalization of assessment effected by the new settlement, and therefore that there is the fairest promise of like extensive benefits attending the introduction of similar settlements throughout the Deccan."

60. Lieutenant Wingate then submits certain returns received from the Kumavisdar of the district, showing the number of new settlers or families who had emigrated to Indapoor since the commencement of the settlement. He afterwards sums up the result detailed in these statements in the following terms:—"It appears then that of the vast extension of cultivation that has taken place in Indapoor subsequent to the commencement of the operations for the revision of its assessment, 3,308 acres 16 goontas only are to be ascribed to new settlers and foreign sources of every description, whilst the whole of the balance, amounting to no less than 67,853 acres 18 goontas, has been effected by the exertions of its old inhabitants." The Collector's statement as to the causes to which the spread of cultivation was ascribable was thus shown to be incorrect, whilst subsequent events have abundantly proved the correctness of Lieutenant Wingate's views, thus early expressed, upon the general effect of the settlement.

61. In reviewing the remarks upon the assessment Government observe, "The question is not whether it is low enough, but whether it is not too low." The results of the measure, as shown in the increased revenue collections in 1836-37 and 1837-38, are admitted to be satisfactory, but Government seemed disposed to think with Mr. Mills, that the increase in cultivation was attributable to some extent to ryots being drawn to Indapoor from our neighbouring districts by the lowness of the new assessment. Subsequently however, on receipt of Lieutenant Wingate's letter

**SELECTIONS FROM THE RECORDS OF THE BOMBAY  
GOVERNMENT.**

**No. CVII.—NEW SERIES.**

**P A P E R S**

**RELATIVE TO THE REVISION OF THE ASSESSMENT**

**OF**

**THE INDAPOOR TALOŪKA**

**IN THE**

**POONA COLLECTORATE.**

**Bombay:**

**PRINTED FOR GOVERNMENT**

**AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.**

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**1868.**



No. 298 OF 1867.

REVENUE DEPARTMENT.

To F. S. CHAPMAN, Esq.,

Chief Secretary to Government, Bombay.

SIR,—With reference to my reports upon the revision of the assessment of Indapoor Talooka, which is now in course of transmission to Government through the Revenue Commissioner S. D., I would beg to represent that it would be satisfactory to myself, and I should suppose, as hereinafter explained, in accordance with the wishes of Government, were Sir George Wingate's opinion upon the measure obtained.

2. In making this suggestion I would beg to explain that when the question of revising the rates of Indapoor—the first settled District of our Presidency—was first raised, it was proposed by the late governor, Sir Bartle Frere, to entrust the duty to Sir George Wingate, and with that object the latter officer was solicited to pay a visit to Bombay for the purpose of making a tour through the country. Sir George Wingate intimated, in reply, that the failing state of his health rendered it inadvisable for him to return to this country, and consequently that he could not undertake the duty referred to.

3. Being made aware of these overtures, I explained to Sir Bartle Frere that in carrying out the duty of reporting upon the revision of the Indapoor settlement, which had been entrusted to me, I would endeavour so far to meet the wishes of Government in obtaining Sir George Wingate's opinion, that I would enter into correspondence with him during the course of my inquiries on the subject. Sir George, however, declined to give his opinion in this manner, stating as his reason for doing so that without the fullest details, which could only be obtained upon the spot, and without having had an opportunity of inspecting the country, he thought my judgment might be fettered by his opinion, formed,

perhaps on an imperfect knowledge of the changes which have taken place since he knew the district. At the same time he expressed a great desire to have an opportunity of discussing the subject personally with me.

4. Considering the great importance to be attached to Sir George Wingate's opinion, I would venture respectfully to suggest to Government that during my contemplated visit to England (for which I have already obtained leave) I may be permitted, with the sanction of the Secretary of State for India, to lay before Sir George Wingate all the papers connected with the report, and consult with him with the view to his opinion upon my proposals being recorded.

I have the honour to be, &c.

J. T. FRANCIS, Lieut. Colonel,

Survey and Settlement Commissioner.

*Camp Khed, 16th April 1867.*

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No. 1550.

REVENUE DEPARTMENT.

*Bombay Castle, 20th April 1867.*

RESOLUTION.—Sanctioned.

F. S. CHAPMAN,

Chief Secretary to Government.

Np. 2026 OF 1867.

REVENUE DEPARTMENT.

To the CHIEF SECRETARY TO GOVERNMENT.

SIR,—I have the honour to submit, for the consideration and orders of Government, a report by Lieutenant Colonel Francis, Survey and Settlement Commissioner, upon the revision of the settlement of the Indapoor Talooka of the Poona Collectorate.

2. The report was received in this office direct from Lieutenant Colonel Francis on the 18th March, and the Collector of Poona, with reference to it, wrote on the 2nd ultimo (letter No. 960) as follows :—

“I have the honour to forward to you the accompanying report\* of Colonel Francis on the revision of 12th February 1867. the settlement of the Indapoor Talooka, without presuming to make any remarks of my own, my experience of the Talooka of Indapoor being so limited, while that of Colonel Francis has extended over many years.”

3. \* The Survey and Settlement Commissioner in reporting (No. 1033, dated 4th December 1866) to Government that the lease of the Kullus Division of the Indapoor Talooka expired with the year 1865-66, and that under ordinary circumstances the revised rates would be introduced in the current year (1866-67), asked, for reasons which he fully explained (the chief reason being “to admit of the whole talooka being brought under the measure at the same time”) to be allowed to defer for a year (by which time the lease for the remaining portion of the talooka would also have expired) the introduction of the revision.

4. The sanction of Government to defer the settlement was conveyed in Government Resolution No. 4574, dated 8th December 1866.

5. The present Survey assessment was introduced *first* into the Kullus Division of the talooka in 1836-37, and was extended in the following year to the remaining portion of the talooka, when



the settlement for the whole talooka was reported to Government for sanction.

6. In the letter from the Chief Secretary to Government to the Revenue Commissioner—extract from which is embodied in paragraph 63 of Lieutenant Colonel Francis' report—it was decided that the duration of the settlement was to be for ten years, as originally sanctioned. It appears, however, from what Lieutenant Colonel Francis states in paragraph 64, that a reconsideration by Government of the arguments advanced by Lieutenant Wingate in favour of thirty years' settlement, the duration of the settlement lease for the talooka was fixed for thirty years.

7. The term of ten years, as originally fixed, was to date from the commencement of 1838-39, the two preceding years being considered years of probation; but for the Kullus Division it appears to have been considered to date from the commencement of 1836-37, and for the remaining portion of the talooka from 1837-38.

8. The Report now submitted contains a full and very interesting review of the following subjects :—

The state of the District and its Revenue Administration prior to the Survey settlement (Part I.)

The introduction of the settlement now about to be revised (Part II.)

Proposals for the reassessment of the Talooka, with full explanatory remarks with reference to the proposed rates, and the probable result of the revision as affecting the revenue (Part III.)

9. As regards the Survey operations under the late Mr. Goldsmid and Lieutenant (now Sir George) Wingate, which are noticed at length by Lieutenant Colonel Francis, notwithstanding the imperfect measurements, the omission to include in the measurements the "Gairan" and Hill lands and the defective classification, the general results of the settlement and measures of reform adopted in connection with it for developing the resources

of the talooka and in improving the condition of the cultivators, seem upon the whole to have been eminently successful.

10. A statement is given in paragraph 76 of the report which comprises a summary of the results of the settlement, and with reference to these Lieutenant Colonel Francis observes—

“These results abundantly prove the success of the settlement. There is no district in India probably, not excluding even the provinces under the permanent settlement, which can show the annual collection of a revenue of above Rs. 80,000, subject for the period of ten years to a reduction of only 6 rupees per annum for remissions, outstanding balances, and contingencies of all kinds.”

11 & 12. As a rule the revision of the Revenue Survey settlements does not, or should not, involve either remeasurements or reclassification of lands, the object being to adjust the assessment, a measure rendered necessary by altered circumstances during thirty years, or whatever may be the term of the settlement, such as the rise and fall of prices, improved communications, &c.; but as regards the Indapoor Talooka it will be seen from what Lieutenant Colonel Francis states (paragraphs 108 to 118) that owing to “imperfect measurements,” and to the survey being “faulty” and “defective in other respects,” an entirely new survey was found to be absolutely necessary, and there can be no doubt, I think, that Lieutenant Colonel Francis was fully justified in resurveying the whole talooka.

13. It will be also seen from what Lieut. Colonel Francis explains in paragraphs 120 to 124 that owing to discrepancies in valuation it was found “safe and expedient in many respects” to make an entirely new classification “based upon the improved system of operations, which with the experience of thirty years has been introduced into the Survey Department since Indapoor was first classified.”

14. The system of survey that was adopted is the “*traverse*,” a combined operation of the Trigonometrical and Revenue Survey systems. The results of the measure are noticed in paragraphs 117 and 118.

15. The main principles which Lieutenant Colonel Francis considers should guide revision operations are detailed in paragraphs 129 to 142, and in paragraphs 143 to 157 is shown how it is proposed to apply them to the Indapoor assessment.

16. The rates proposed in paragraphs 158 and 161 are as follows :—

A maximum rate of one rupee per acre, with a reduction of 2 annas for some villages, and a special increase of 2 annas for Indapoor itself. To 13 villages round about Kullus, extending from Kullus towards Baramattee, which are the most unfavourably circumstanced in respect to rainfall, a maximum rate of 14 annas is proposed.

17. For certain lands bordering on the banks of the Bheema, which are annually flooded by the freshes, and in this manner rendered more fertile, a maximum rate of Rs. 1-8-0 is proposed.

18. It will be seen that the increase of annas proposed is from 12 (the maximum rate on which the present assessment is based) to one rupee, which is equivalent by itself to an addition of 33 per cent.; but it is explained by Lieutenant Colonel Francis that, owing to new lands which have been held in excess of the assessed area having been increased and classified and the higher rate applied to them, the assessment will be increased to 53, instead of 33 per cent.

19. According to the statement embodied in paragraph 163, the amount of the proposed reassessment exceeds the present assesement by Rs. 43,309, an addition of 57 per cent. on the present assessment of the talooka. Still with this addition the average rate upon the whole culturable area will be only 7 annas 6 pies per acre.

20. This is moderate enough, it must be allowed, as an average rate, but I do not consider it the least too low for Indapoor. With reference to existing prices, and probability, if not certainty, of their continuing as high as they are now for years, improved communications, new markets, and such like considerations, if the Indapoor Talooka had an average rainfall which could be depended

upon, be it more or be it less, the proposed rates might be pronounced too low for a thirty years' settlement; but it must not be overlooked when considering the question of rates that Indapoor is one of the most unfavourably circumstanced of any of the talookas in the Deccan or Southern Maratha Country as regards its rainfall. In some parts of the talooka rain appears never to fall seasonably, and it is generally when seasonable scanty and precarious. Year after year lands are left unsown for want of moisture, and those that are sown produce next to nothing; failures of crops, more or less general and extensive, appear to be the rule, and a good, or even a fair, average harvest the exception.

21. Taking the above *facts* into consideration, and weighing them against the other considerations, the balance is, I submit, greatly in favour of very low rates of assessment. I might go further and say the lowest that can be fixed without unnecessarily sacrificing revenue—if it is intended that the revenue should be realized according to the assessment—as far as I am in a position to judge, I have no hesitation in offering it as my opinion that higher rates could not safely be proposed, and I would therefore respectfully recommend that Lieutenant Colonel Francis' proposals be sanctioned.

22. The assessment of the well garden lands is noticed in paragraphs 174 to 178. Lieutenant Colonel Francis considers that the time has come for discontinuing the extra cess, if not in all districts, as a general rule in drought-stricken districts like Indapoor.

23. Lieutenant Colonel Francis' proposes in lieu of the extra cess a plan of assessment according to which the first class Jeerayet rate is to be applied to such lands irrespective of the rates assigned for Jeerayet classification, and in this proposal I fully concur, and would respectfully recommend that its adoption be sanctioned, not exclusively for Indapoor, but as a rule, when the time for revising the Survey assessment comes, in every district which has suffered, and continues to suffer, like Indapoor, from drought, or a succession of unfavourable seasons.

24. As observed by Lieutenant Colonel Francis in paragraph 176, it is almost impossible to overrate the importance of well cultivation in a drought-stricken district like Indapoor, and it is, I respectfully submit, the duty of Government to afford every possible encouragement to it.

25. The remarks made by Lieutenant Colonel Francis in paragraphs 179 and 180 appear to me to be very just, and they will doubtless be fully considered by Government. I see no objection to the adoption of the course recommended at the close of paragraph 180, viz. that "for a stipulated period," say pending the duration of the settlement, no addition shall be made to the local land revenue, one anna being the maximum amount leviable during the new lease.

26. As regards the duration of the proposed settlement, Lieutenant Colonel Francis has, I am respectfully of opinion, satisfactorily shown that a permanent settlement is wholly inapplicable to a district like Indapoor. I entirely concur in the views expressed by Lieutenant Colonel Francis in paragraphs 181 to 185, and would beg to support his recommendation that the proposed revised assessment be declared unalterable for the term of thirty years.

I have the honour to be, &c.

J. W. HADOW,

Revenue Commissioner S.D.

*Camp Mahableshwur, 22nd May 1867.*

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No.                      of 1867.

To E. P. DOWN, Esq.,

Collector of Poona.

*January 1867.*

SIR,—The thirty years' lease of part of the Indapoor Talooka having expired with the past revenue year, I have the honour to submit a Report upon the Revision of the Settlement of the district.

2. Before entering upon the more immediate subject of my report, I shall endeavour to lay before you a brief history of the state of the district, and of its revenue administration generally, prior to the introduction of the Survey Settlement. The history of that measure will come next in order, and I shall then explain my own proposals for the reassessment of the district.

PART I.—*The state of the District and its Revenue Administration prior to the Survey Settlement.*

3. The Tunka assessment fixed by Mullic Umber during the Mahomedan government of the Deccan is the first revenue measure of which any account has been retained. The Tunka, which is the jumma or total assessment of a village, was a cash rental, based according to traditionary accounts upon an estimate of a third share of its produce. The assessment was fixed in the gross, its apportionment to individual holdings or estates being left to the village community.

4. The Tunka continued for some time after the Maratha government was established, but was eventually superseded, in or about the year 1784-85, by what is generally known as the "Kumal" assessment. This assessment was grounded upon a classification and valuation of the land of each village. It would appear to have been undertaken partly with the view of ascertaining the general capabilities of the district, and thereby furnishing the State with a record of its own resources, though the increase of the public revenue was doubtless the main object of the measure.

5. From the different accounts of the state of the district at the period, it seems to be generally established that the resources of the country had been considerably augmented since Mullic Umber's assessment was imposed. The predatory habits of the Marathas, and the plunder gathered by the Paishwa's army from other parts of India, tended mainly, no doubt, to bring about a more prosperous state of things. The depreciation in the value of money since the Mahomedan standard of assessment was fixed is another cause which, no doubt, operated in producing a revision of the State's demands.

6. A revision under such circumstances was certainly justifiable, as the State might fairly claim some share of the general increase in wealth resulting from changes which its own policy had been mainly instrumental in bringing about. Unfortunately, however, the Māratha government over-estimated the value of the permanent resources of the district, and pitched their assessment much higher than it should have been. The Kumal assessment for the whole district, as it then existed, amounted to about Rs. 2,22,800, whilst the Jumma of the Tunka, which it had superseded, was only Rs. 1,02,000. The total assessment of the district was consequently more than doubled by this new measure.

7. The realization of this assessment being soon found impracticable by the officials, the plan of farming the revenues of the district was next resorted to. This led to the introduction of a system of levying extra cesses in excess of the standard assessment, that being almost the only means by which the farmer could obtain any profit. Many of the cesses thus imposed were subsequently included in the accounts under the head of "Babtees," and thus became an integral part of the State's demands.

8. The levy of these extra cesses, incursions of plundering armies, and a succession of bad seasons, had nearly depopulated the district, when, in about 1807-08, the Government endeavoured to re-establish villages by the introduction of a system of leases (Istawa) providing for a small annually-increasing rent, extended over nine years, when the Tunka rates were to be taken. This measure proved generally unsuccessful. A further term was then added to the leases; meanwhile the Māratha war broke out, and the Deccan was ceded to the British government.

NOTE.—Kumal rates should, I think, be substituted for Tunka, as the latter had been superseded; but I have used the Revenue Commissioner's words.

9. During our early administration of this district the revenue was generally collected under a system of Ookta and Kowlee rates, the management and fixing of which was left almost entirely in the hands of the Patel and Coolkurnee. The Istawa lease system of the former government was also adopted in some cases.

No regular system was inaugurated, and the different settlements attempted proved unsuccessful.

10. A succession of bad seasons supervening upon these imperfect arrangements tended to complicate matters. Failure of crops and high rates rendered annual remissions necessary. Owing, however, to the corruption of the district and village establishment, by far the greater part of the sum intended as a relief to the ryots was appropriated to their own use by the native officials. This, added to the general disordered state of things, completed, as the Revenue Commissioner has expressed it, "the confusion of the village management."

11. It was thought that a regular survey and assessment would remedy these defects, and accordingly such a measure was inaugurated under Mr. Pringle. That officer's operations comprised a field survey of all the cultivated and culturable lands of the village, accompanied with a regular classification of the soil. He prepared elaborate estimates of the produce of the different kinds of soil, and after allowing for expenses of cultivation, a certain percentage of the remaining net produce was taken as the assessment of the land.

12. But Mr. Pringle's settlement, though fixed upon a system which at first sight appears to be the best practical way of arriving at an estimate of the capabilities of the soil, and thence deducing its assessable value, has nevertheless been admitted to have been an entire failure. The failure was due in some measure certainly to the faulty and dishonest manner in which the classification of the soil was carried out and the crop returns prepared. But independently of this, I am persuaded that it is almost impossible to frame returns of the produce of a district having such an uncertain climate as Indapoor. For three consecutive years in some parts a general failure of crops has been known. A bumper season follows perhaps, which again is followed by two or three years of more or less deficient returns. A fair average should of course embrace a series of these several years. I need hardly say the preparation of such returns for all kinds of soil—and Mr. Pringle's system proposed to fix the assessment on such data—is a



work of time and labour which no man could reasonably expect to be able to carry through.

13. The causes of the failure of his system have, however, been fully described by the Survey officers employed in the assessment of Indapoor—Lieutenant (now Sir George) Wingate and Lieutenant Nash—from whose reports the following extracts have been taken :—

“The Survey rates were fixed at fifty-five per cent. of the net profit on land, and of this system the disproportion above alluded to appears to have been the natural effect. Assessing fields at a percentage of the net profit was, in fact, remunerating the cultivator, not in proportion to the value of the field on which he laboured. To show how unequally by this system people requiring the same funds for their support were remunerated, I have calculated from the Survey paper of thirteen villages in the Indapoor Pergunna the sums which, had the Survey been conducted in other respects on right principles, would have been left with the respective holders of fields of the nine kinds of soils so differing in size as to require each an annual expense of 5 rupees for their proper cultivation. They are as follows :—

1st Black.	2nd Black.	3rd Black.	1st Red.	2nd Red.	3rd Red.	1st Burrud.	2nd Burrud.	3rd Burrud.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
2 11 11	2 8 7	1 3 5	1 9 5	1 4 8	0 15 4	0 15 10	0 10 3	0 6 10

“The fair sum to have left with each of the owners of these fields, as calculated from the same papers, would have been somewhat more than one rupee.”

14. In commenting on these remarks Lieutenant Wingate observes—

“To afford a further illustration of the effect of these principles upon the Survey assessment, I have compiled the following table from the papers of the village of Ooplay Boodrook in the

Marha Talooka, in which the assessment was fixed at 55 per cent. of the net produce as estimated by Mr. Pringle's assessors. Column No. 1 of the table gives the number of acres of each description of soil, which, according to their calculations, can be cultivated at an annual expense of 100 rupees. Column No. 2, the net produce per acre, and No. 3, 55 per cent. of this, or the rate of assessment; No. 4, the amount of assessment upon the number of acres entered in column No. 1, and No. 5 the balance of net produce or profit remaining to the cultivator. By inspecting the last-mentioned column it will be found that from 1st Black to 3rd Burrud the profits of cultivation vary from Rs. 32-8-3 to Rs. 12-5-3, the expenses in every case being 100 rupees. The total amount of assessment upon the number of acres entered in column No. 1 of the table is Rs. 236-7-2, and the three last columns are entered to show how, under the supposition of this remaining the same, the rates should, in my opinion, have been adjusted to leave the profits of cultivation in all cases exactly equal.

*STATEMENT illustrative of the inequality of the Survey Rates in consequence of being a percentage of the Net Produce, and showing how they might have been fixed so as to render the profit of cultivating every description of Land exactly equal.*

No.	NAMES OF SOIL.	No. of Acres capable of being cultivated at an annual expense of 100 Rupees.		Value of Net Produce or Rates of Assessment per Acre.		SURVEY RATES, &c.				PROPOSED RATES, &c.			
		Acres.	Goonts. Annas.	Rs. a. p.	No. 2.	55 per cent. of Net Produce, or Rate of Assessment per Acre.	Amount of Assessment on the number of Acres in Col. No. 1.	Balance of Net Produce, being the profit of Cultivation.	Proposed Rates Assessment of Acres in Col. No. 1.	Amount of Proposed Rates Assessment on the number of Acres in Col. No. 1.	Balance of Net Produce, being the profit of Cultivation.		
						Rs. a. p.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	
1	1st Black .....	28	36 ..	2 8 0	..	1 6 0	39 11 9	32 8 3	1 12 1	50 11 1	21 8 11	21 8 11	
2	2nd ditto .....	29	15 ..	1 15 3	..	1 1 3	31 10 9	25 11 2	1 3 6	35 13 0	21 8 11	21 8 11	
3	3rd ditto .....	34	33 ..	1 7 9	..	0 13 0	28 4 9	23 6 4	0 13 10	30 2 2	21 8 11	21 8 11	
4	1st Red .....	29	13 ..	2 0 6	..	1 1 9	32 8 6	27 0 7	1 4 9	38 0 2	21 8 11	21 8 11	
5	2nd ditto .....	35	1 ..	1 5 3	..	0 11 9	25 11 6	20 12 9	0 11 5	24 15 4	21 8 11	21 8 11	
6	3rd ditto .....	40	29 ..	0 14 4	..	0 7 9	19 11 3	16 12 5	0 5 10	14 14 9	21 8 11	21 8 11	
7	1st Gravelly .....	40	14 ..	1 2 1	..	0 10 0	25 3 6	20 6 1	0 9 7	24 0 8	21 8 11	21 8 11	
8	2nd ditto .....	40	34 ..	0 13 2	..	0 7 3	18 8 2	15 1 7	0 4 9	12 0 10	21 8 11	21 8 11	
9	3rd ditto .....	43	33 ..	0 10 0	..	0 5 6	15 1 0	12 5 3	0 2 2	5 13 4	21 8 11	21 8 11	
Total.....		..	..	....	..	....	236 7 2	194 0 5	....	236 7 4	194 0 3	236 7 4	194 0 3

“ There are, however, other sources of error in the Survey assessment to which, with that already mentioned, must be attributed its failure, more than to any defects of execution. The chief of these consist in it being founded on an average of the prices of grain and the amount of collections during previous years, without a due consideration being given to the actual condition of the people, and to an investigation of the causes which during the years of the average had made these prices and collections stationary or fluctuating, advancing or declining. To adopt as a basis of assessment an average of past collections was to admit that the previous settlement was not heavy as a whole, but merely required being properly apportioned, which the yearly increasing poverty and wretchedness of the people, a declining cultivation, and a progressive fall in the price of grain, notwithstanding a diminished supply, all tended to disprove. The calculations, too, for fixing the Survey assessment were made upon the supposition of the land being properly tilled, whereas there is perhaps not one field in ten in this collectorate that is so, or that commonly yields the quantity of produce estimated in the Survey returns. These circumstances contributed to make the Survey assessment high, while fixing it at a percentage of the net produce made it unequal; and to them may be attributed its failure rather than to the venality of the native establishment employed in carrying it into execution. These may have been bribed in numerous instances to effect a reduction of the rates, but this would have tended to secure the success, rather than involve the failure, of an assessment, and that they should systematically over-assess inferior and uncultivated lands without the prospect of gain, and at the risk of detection, appears to me very improbable. I have dwelt at this length upon the Survey assessment at the risk of being thought tedious on a question not immediately bearing upon my subject, that by exposing the sources of error which, in my opinion, occasioned its failure, my superiors may be better able to form a correct estimate of the principles on which the present revision has been conducted.”

15. According to the opinions of the officers here quoted,

the failure of the settlement is attributable more to the faulty principle by which 55 per cent. of the net produce was set apart as the basis of the assessment than to the malpractices of Mr. Pringle's native establishment. Both causes combined, no doubt operated in bringing about the result, and for our present purposes it is immaterial which had the greater influence.

16. The defects of the settlement were early foreseen by the revenue officers. In the first year of its introduction the Collector expressed great fears of its success. He reported that the Jumlabundy, according to the rates, amounted to Rs. 91,589, of which only Rs. 42,299, or less than one-half, could be realised. In the following year the ryots refused to cultivate their fields according to the Survey rates, and after local inquiry the Collector directed that no increases exceeding 25 per cent. on the former assessment should be demanded. Afterwards it seems to have been ordered that for the year the new rates should be collected only in cases where they were lower than the old. This arrangement failed, and remissions had to be granted.

17. It was next sought to remedy the defects of the settlement by the adoption of a scale which provided that only a regulated portion of the increases due to that measure should be collected. It was also arranged that half the new assessment should be remitted in respect of lands which had been waste five years anterior to its introduction; and further, in cases where lands had been longer out of cultivation, that only a fourth of the assessment should be levied.

18. In summing up the result of these measures the Revenue Commissioner observes as follows:—

“The prescribed assessment has thus fluctuated between the former rates and the new. It may be supposed that the former rates referred to some well-known standard of taxation. But this is not the case. They would be better described as the result of accident or temporary circumstances; for what was adopted as the basis was really the Ooktee and Cowlee rates (which are liable to fluctuate annually according to the state of the village, the means of ryots, and the

alluded to above, the results of the settlement were pronounced to be highly satisfactory.

62. In disposing of the question affecting the manner adopted for assessing well Bagayet lands, Government agree with the Revenue Commissioner that Mr. Mills had misunderstood the orders of the Honourable the Court of Directors, directing that "land should be assessed according to its capability, and not according to its produce," in quoting them as prohibitory of an assessment being placed upon Bagayet land. They then observed, "The capability of the land depends as much on the facility of irrigation and local peculiarities as it does on the colour and depth and other qualities of the soil. The principle therefore on which Bagayet is assessed at higher rates than Jerayet is one which must be admitted generally." They next proceed to consider whether it would not be expedient to suspend the operation of the principle in a district where water is deficient like Indapoor, and, finally, dispose of the whole question in the following terms:— "Your predecessor has stated his opinion that the rates fixed are low, and that the country is well able to bear them. The Engineer officers seem of the same opinion, and the Honourable the Governor in Council therefore considers it unnecessary to direct any change to be introduced."

63. The last, but perhaps the most important, point of the report upon which a decision had to be passed was in respect to the duration of the settlement lease, whether it should be for ten years, as originally sanctioned and strongly recommended by the Collector, or whether it should be for thirty years as proposed by Lieutenant Wingate and advocated by the Revenue Commissioner. The decision was in favour of the ten years' lease; and I think it right to quote *in extenso* the arguments advanced by Government in arriving at this decision:—

"The period during which the present survey and assessment is to be secured without enhancement to the ryots is next to be considered. Lieut. Wingate is disposed (para. 17) to a permanent settlement, or, at least, to one of thirty years' duration, instead of the term, at present fixed, of ten years.

This reasoning is of a general nature applicable to the general question, whether a permanent is not, *cæteris paribus*, preferable to a temporary settlement. Your predecessor, I am instructed to state, is a strong advocate for permanency, while Mr. Mills argues on the other side, and it must be admitted that his arguments are weighty and deserving of serious consideration.

“ It must not be forgotten that the very causes which have been cited as the grounds for the present measure are still in full operation. The price of grain is still falling, and it is impossible to say whether the average of the next ten years may not be as much below that of the last, as that was of the ten years preceding. Where there is but one staple produce in the country, as is unfortunately the case in these districts, and that staple grain, there is far more probability of such a result than in a country producing articles of export or for manufacture within it, even though the value of the precious metals should remain stationary. On the other hand it is impossible to foretell what may be the result of the continuance of our rule and of those measures for the improvement of the country and of the condition of the people which we are gradually introducing.

“ Added to this is the consideration that the present is but an isolated experiment. The extension to the whole of the Deccan of the same measures and the same rates of assessment as those introduced into Indapoor may, the Governor in Council conceives, be productive of results which will materially affect the now apparently flourishing condition of that talooka. Enjoying now advantages which are confined to it alone, it is not to be expected that the elevation of all the surrounding districts towards its level will not be attended with some corresponding depression of Indapoor. The height to which it has been raised may prove rather relative than positive, and, if so, an adherence to the present measure as a permanent settlement may produce the very evils which it is so desirable to avoid. Numerous failures ought, moreover, to

lead us to hesitate before placing ourselves in a position from which we cannot retrace our steps. It is very true, as Mr. Williamson argues, that by fixing the present as maximum rates we can always step forward to relieve the agricultural classes by further reductions, but the present rates have not, it must be confessed, been fixed on so perfect and decisive a principle as would justify Government in limiting its demand on the land to them under every change of circumstance to which the country can by any possibility be liable.

“The Governor in Council therefore conceives that it would be preferable to adhere to the term first fixed of ten years, say from the commencement of the present season 1838-39. Assuming that the two preceding years have been years of probation, the revision having taken place but partially in 1836-37, and having been extended throughout the pergunna in 1837-38, there can be no objection to declare the intention of Government, at the expiration of this period, to continue the settlement for a further term, should the beneficial effects expected from it be found to have resulted.”

64. The question of the expediency of granting thirty years' leases was soon again brought before Government by Lieut. Wingate, and, in re-considering the arguments in its favour advanced by that officer, it was eventually decided, in 1838, that the settlement already introduced, as well as future ones, should, as a rule, be considered fixed for thirty years.

65. With the exception of the mention of a 12-anna rate in Lieutenant Wingate's report, there appears to be no other allusion in the official correspondence to the maximum rate fixed for the district. I find, however, from the Marathi records, that the same rate was applied throughout in the villages of the Kullus Division, as well as in those settled subsequently in 1837.

66. It is difficult to make out the amount of reduction resulting from the immediate application of the new rates. According to the statement given in the report, Mr. Pringle's assessment on the whole district amounted to Rs. 2,03,000, whilst the new survey



Jumma is stated in round numbers to be Rs. 84,000.\* The difference between these two assessments is

\* Is also entered in the report as Rs. 83,818.

Rs. 1,19,000 ; but as these statements include the assessment of the waste as well as of the

cultivated land of the district, they do not show correctly the actual reduction made at the introduction of the settlement. No comparative statement showing the immediate effect of the measure upon the cultivated area seems to have been prepared at the time. This omission is probably attributable to the confused state of the accounts caused by the many changes made in Mr. Pringle's rates, by which, as before explained, the realization of a considerable part of his assessment had been foregone. The fairest way, perhaps of showing the immediate effect of the measure is to compare the Jumma bundy fixed for the year preceding the settlement with that of the settlement year, which gives the following result :—

	Jumma bundy.	Remission and Outstanding Balances.	Realization.
Year 1836-37..	99,030	30,240	68,790
Do. 1837-38..	72,791	4,193	68,598
	<u>26,239</u>	<u>26,047</u>	<u>192</u>

67. According to this statement the reduction in the Jumma bundy of the two years here compared amounted to 26 per cent. This, however, can be regarded only as an approximate estimate of the actual demand upon the land under the two settlements, as the temporary reductions made in Mr. Pringle's assessment are involved in the account.

68. The settlement was followed by an immediate extension of cultivation. The extract of Lieutenant Wingate's letter, given in a preceding para., shows that the large extent of 67,853 acres of waste was brought under tillage during the first two years of its operation, and cultivation kept steadily increasing annually up to 1840-41, when the total area of the waste was comprised under the small extent of 5,160 acres. The revenue of this year amounted

to Rs. 76,192, whilst the remissions given (Rs. 905) bore the small proportion of about  $1\frac{1}{4}$  per cent. on the whole demand.

69. A slight check to cultivation set in from this period, and owing to the occurrence of two consecutive bad seasons (1844-45 and 1845-46) the waste during the latter year had again increased to 24,550 acres, whilst the remissions given were above 50,000; the revenue actually collected being only 22,770, or about one-third of the demand. This brings us to the end of the first decennial period of the lease.

70. From the results here detailed I think we may infer that the great fall in the revenue, accompanied with an extensive decline in cultivation which took place in the two last years, is attributable to the ryots having taken up more land than they had the means of cultivating properly. They were unable to meet the Government demand on the occurrence of the first bad season, and a second following immediately upon it called for remissions on an extensive scale. So far therefore as we can form an opinion from these results, the assessment to this date may be said to have been quite as high as the people could afford to pay regularly.

<i>* Ten years' average.</i>	
Under Settlement	Rs. 65,220
Prior to do.	„ 40,256
	<hr/>
	Rs. 24,964

The average realizations of the ten years show an increase certainly of nearly Rs. 25,000\* over and above the average of the ten years preceding the introduction of the settlement, but then, again, the remission in the last year, as above mentioned, exceeded Rs. 50,000.

71. During the first five or six years of the next decennial series, commencing with 1846-47, cultivation was somewhat unsteady, the extent of the waste having ranged from 24 to 11,000 acres. It then took a fresh start, and in 1855-56, the last year of this decennial series, the total extent of unoccupied land was reduced to 1,300 acres.

72. The collections were much more regular during this period, and remissions, with the exception of two years, when

they amounted to Rs. 2,700 and Rs. 3,900 respectively, had ceased almost entirely. They were quite nominal during the last two years, being respectively only Rs. 11 and 18. The average annual realizations for the period amount to about Rs. 77,000.

73. The almost entire cessation of remissions during this period may be taken as a certain indication that the cultivators' resources had materially improved. They could now pay their assessment in indifferent seasons as well as in good ones, for the annual Jummanbundy reports of the district show that there were several such seasons during the period referred to. The gross revenue payable for the ten years amounts to Rs. 7,79,194, which was all realized with the exception of the small sum of Rs. 8,655, thus showing that the collections were only a little more than 1 per cent. less than the full demand.

74. This brings down our review of the settlement to the last ten years of the lease, embracing the past year of 1865-66. The whole district may be said to have been regularly under cultivation during this period, the highest return of waste in any year being only 1,176 acres. The accounts of the past year show an extent of 930 acres under the head of waste; but this return includes some tracts of assessed gairan made over to the villagers as free grazing lands, but which, owing to their bearing an assessment, have been included under the waste. But with the area unduly increased by this mode of account, the waste bears the infinitesimal proportion of  $\frac{1}{3}$  per cent. to the total area of the district.

75. The revenue returns for the period are perhaps even more satisfactory. Out of the large amount of Rs. 8,30,545, which is the aggregate revenue demand for the ten years, only the sum of 61 rupees had to be foregone.

76. The following statement comprises a summary of the several results explained in the preceding paragraphs :—

	AVERAGE ANNUAL			Collections show an Increase on average of ten years' preceding Settlement.	
	Jumma- bund Settle- ment.	Remissions.	Collections.		
	Rs.	Rs.	Rs.	Rs.	Percentage.
First decennial period ....	77,443	12,223	65,220	24,964	62
* Second ditto ....	77,919	865	77,054	36,798	91
* Third ditto ....	83,054	6	83,048	42,792	106
General average of the 30 years .....	79,472	4,365	75,107	34,851	86

These results abundantly prove the success of the settlement as a revenue measure. There is no district in India probably, not excluding even the provinces under the permanent settlement, which can show the annual collection of a revenue of above Rs. 80,000, subject for the period of ten years to a reduction of only 6 rupees per annum for remissions, outstanding balances, and contingencies of all kinds.

77. But the settlement would have been comparatively of but little benefit to the cultivators if it had not been accompanied with measures for developing the resources of the district. Foreseeing this, the Survey officers turned their attention at once to this subject. The opening of roads and devising improved means of transit were the primary matters of consideration. Amongst the useful improvements projected at this time, the construction of a new description of light cart proved a measure of the greatest importance.

78. In a speech delivered at one of the debates upon the Survey Bill, His Excellency Sir Bartle Frere has given an interesting description of the proceedings of the Survey officers at this

\* NOTE.—Five and six per cent. respectively should be deducted from the revenues of these periods as a set-off for the collections from two lapsed villages not included in the ten years' average preceding settlement.

period. Speaking of the state of the Poona and Sholapoor districts, he observes—

“Beyond Poona, carts were then very rarely seen; in five months he remembered seeing only three carts in the districts between Poona and Sholapoor, and these were brought from some Madras station. The only indigenous cart-wheels were at that time mere discs of stone; the carts were large lumbering contrivances, and remained as heirlooms in families for generations. They were so heavy that it took eight or ten bullocks to draw them when loaded. They were not used for the carriage of ordinary produce, but only for carting manure to the fields. Now the first step towards improving the physical condition of an agricultural people in a low state of civilization is to give them increased facilities of communication. Lieutenants Wingate and Gaisford early apprehended this fact, and applied themselves to increase the facilities of transit in the Deccan. They had at first very small means at their disposal for the attainment of this object. The Government at first gave Lieutenant Wingate small sums, often as low as Rs. 5 per mile, for the improvement of roads. Little could of course be done for such an amount beyond removing the most serious impediments to wheeled traffic along existing tracks, but even this was a great boon to the country. Lieutenant Gaisford then applied himself to improve the country cart. The ordinary Deccan cart in its present form was the result of his labours, and it would be difficult to convey to any one who had not witnessed it, an adequate notion of the amount of time, trouble, thought, and contrivance which were applied to invent a cart which should meet all the conditions required. It was to be as light and cheap as possible and yet strong enough to be used in a stony country, where roads were almost unknown, and where artificers capable of repairing the most simple wheeled vehicle were often not to be found within fifty miles.

“Lieutenant Gaisford set up a manufactory for these carts at Timboornee in the Sholapoor districts, and there he

not only made carts but trained artificers from the villages around to repair them. At first it was difficult to find any one who would buy the carts even at cost price, except as a favour; now they have entirely replaced not only the old carts with stone wheels, but the Brinjaree bullocks, which formerly did the whole carrying work of the country. And the carts have in their turn helped the improvement of old roads and the opening of new lines of communication. If the survey had conferred no other benefits on the country than by contributing, as they had done, towards the formation of good roads and a good description of wheeled carriage, it would have more than repaid all the expense that had been incurred on account of it."

79. But besides the views of Government officers regarding the benefits conferred upon the Poona districts by the survey settlement, I am glad to be able to quote the opinion on the subject of that talented public servant, the late Professor Green, who, as the special correspondent of the *Bombay Gazette*, undertook in 1852 the work of reviewing the whole history and progress of the survey settlements from their first introduction up to that date. All the Government records containing any information upon the subject were placed at his disposal. He was also furnished with statements exhibiting the working of the settlement in the several districts to which the measure had been extended. Every facility indeed for elucidation of the subject, as he readily admits, was placed at his disposal.

80. Mr. Green's review was afterwards published in the form of a pamphlet, entitled "The Deccan Ryots and their Land Tenure." After showing the financial effects of the settlement, he sums up the general results of the measure in the following terms:—"And if we conceive the problem proposed to have been to show that equalized and greatly reduced rates, with a liberal and fixed tenure, would lead to an increase of cultivation—an increase so extensive as completely to compensate the Government for its large remissions of revenue—we must admit that the extreme liberality of the settlement, and the skill and care with which it

has been conducted, have been rewarded by the most entire success. If we enter upon the much larger question of the general progress of the people in industry and wealth, then, very satisfactory as this increase in agricultural industry is, we shall still evidently require to seek out answers to the three remaining questions in the list with which we concluded our fifth article."

81. The following are the questions referred to above :—

2nd.—Has there been a corresponding increase in other branches of production for the same market ?

3rd.—What is the increase of exports from the districts to which the new settlement has been introduced ?

4th.—What, since the introduction of the new settlement, has been the history of prices in the district ?

82. Mr. Green seems to have been strongly impressed with the belief that low as the assessment was, it would still be found that the increased production consequent on the spread of cultivation which had everywhere followed the settlement, would so glut the market that the fixed money payment would be found too heavy for the cultivators to meet. Referring to this subject he observes—

"It is altogether impossible that a people raising merely bulky and coarse agricultural produce should ever be able to pay a money revenue of any amount, and not only so, but they themselves, however liberally treated, can never be otherwise than wretchedly poor—in favourable seasons living perhaps in rude and coarse abundance, but reduced to poverty and distress at the occurrence of every unfavourable one."

83. And again, in reference to the same subject, he says—

"The one point to bring out is the importance, both to the Government and the people, of the production of exports. The simplest change which could be brought about—the variety of industry which, as resembling most nearly what he already practises, the ryot would most easily fall into—is the raising of commodities for the foreign market from the soil.

The Hindoo is now known to be much more docile than was formerly believed, and we cannot help thinking that something like the agricultural schools, model farms, and itinerant agricultural teaching which have lately been doing so much good in Ireland, some adaptation of them suitable to India would not be found beyond the power of our Revenue Secretary and revenue survey officers to bring into existence. The successful introduction of an export which should bring money into the province, and raise general prices to the extent of only one shilling on each acre of revenue produce, would be a second boon almost as great as that of the settlement itself, and would richly pay for much unsuccessful, or partially successful, previous experimenting. We do not think that any unfavourable augury is to be drawn from the little success which has attended some of the ill-conceived experiments to improve the products of the province which have already been made. Where the Grant Medical College, the Elphinstone Institution, and the Poona College succeed, we do not see why an agricultural school, if attempted with all the light on the subject which may now be obtained from home need be under much apprehension of failure."

84. Mr. Green finally sums up the result of his inquiries in the following manner :—

"1st.—The reduced rates appear almost everywhere to be followed by a rush on the land, and far more land is taken up than the ryots have properly capital for, leading, as a necessary consequence, to a great deal of very slovenly cultivation.

"2nd.—There occurs subsequently, in almost every instance, a period of reaction. Cultivation carried on without sufficient capital exhausts the soil, and a time usually arrives when the land reported in the annual revenue returns as thrown up during the year from 'poverty and exhaustion'—that is to say from the poverty of the ryots and exhaustion of the soil—to which may perhaps be added, though this is



less certain, from the discouragement arising from glutted markets, exceeds the new land taken into cultivation during the same year.

“3rd.—This reaction—this unfavourable balance of lands thrown up over new lands taken into cultivation is in no case very important in amount; the gross produce, in spite of the imperfect tillage, being, from the greater breadth of land under cultivation, decidedly greater. Agricultural capital does everywhere on the whole increase, as do also, although (except perhaps in Dharwar) very much more slowly than could be wished, the exports which are to relieve the overstocked markets.

“4th.—In the best districts some improvement is perceptible in the style of agriculture and in the implements in use among the people, the result of increased means and of an increase of independent feeling and energy on the part of the ryot. We have already noticed the successful introduction of New Orleans cotton, and of a modification of an American saw-gin; and we may here add to them the rapidly-increasing number of convenient light two-wheeled bullock carts—a conveyance introduced into these provinces by our revenue officers. The only collectorate from which we have been able to obtain returns under this head is the Sholapoor one; and for that district the statement is as follows:—

1834-35, number of carts in the district....	430
1846, do. do. ....	1,907
By last returns, do. do. ....	2,643

“Also in Kurmalla, a talooka previously included in the Nuggur Collectorate, but now combined with Sholapoor—

1846, number of carts in the district.....	391
By last returns; do. do. ....	983

“5th.—There is, on the other hand, everywhere a lamentable amount of indebtedness, and of a thralldom to money-lenders most depressing in its effects on the ryots’ energies.

But this again is certainly diminishing in the best districts, and perhaps also very slowly in the others.

“6th.—Although whoever sets himself to look for pauperism and misery in the province may find quite enough of them to excite the most painful feelings in him, and although the five shillings an acre of returns from the land, and the shilling or 15 pence of rent, tell a most sorrowful tale of wretched unskill, unenergy, and unproductiveness generally, and cry aloud to us to do whatever may be in our power to increase the intelligence and to raise the industrial character of the people, yet, leaving individual cases, and perhaps peculiarly unfortunate talookas, and looking to the result in the mass, there are certainly quite unmistakable indications of the effect that the tide is slowly turning. We have already stated many of these, and will only here refer our readers again to the rapidly-increasing exports and imports, and especially to the large and growing absorption of silver and copper—a fact which can only, we believe, be explained by supposing that in some of our districts silver ornaments and copper vessels—the indisputable signs of growing prosperity in a Hindoo community—are decidedly on the increase.”

85. Captain Wingate, who was in regular correspondence with Mr. Green whilst preparing the review, considers his summing up of the results of the measure to be not so favourable to the survey as the actual state of the districts would indicate. The following remarks are extracted from one of Captain Wingate's letters to Mr. Green upon the subject:—

“I am quite at one with your other critics as to the perfect fairness of your whole representation, and your summing up agrees in the main with my own views, though considerably less favourable to the survey. The following suggestions will explain the points on which I am at all doubtful of the validity of your results. I will take your six paragraphs in order:—

“1st.—The deficiency of capital may have been compensated by increased industry, and the evidence seems to show

that it was so to a considerable extent. The slovenly cultivation referred to under this head is not, I think, proved, unless it refer to the new land taken into cultivation immediately following the introduction of the new settlement.

“2nd.—I am not satisfied that cultivation, carried on without sufficient capital, exhausts the soil. It is not, in my opinion, the want of capital so much as a bad style of farming that exhausts the land. It is continued cropping without manure that does the evil, and the greater the capital employed in this style of farming, the more rapidly will the exhaustion proceed, because the heavier will be the crops taken off without anything being given to the soil in return.

“3rd.—The remarks on 1st paragraph apply with greater force to this. I am not aware of anything in the evidence that supports the conclusion that, after the reaction, the land in cultivation is more imperfectly tilled than before the settlement; this is a point to be established by testimony more than by statistics. Frere’s account of Indapoor and my own observation, if not overbalanced by the evidence of equally competent witnesses, lead, I think, to the conclusion that improved tillage is a general result of the survey settlements, and consequently that a gross produce has been increased by this as well as by an extension of cultivation. A further inference from this would be, that agricultural capital increases not slowly but rapidly. Without having seen your appendix on prices I am not in a position to offer an opinion on your conclusion, that the markets are overstocked. Prices in this country are ultimately dependent on the necessity of exporting enough to meet our home charges, and this will probably always keep them at a low standard.

“4th.—The remarks on the improvements in tillage already given apply also here. I may as well mention in this place that I greatly understated the number of saw-gins sold to natives in this collectorate (Dharwar) in a former letter. I have now obtained from Mr. Blount, the Superintendent of Cotton Experiments in this province, the following information

as to the number, size, and price of gins sold in this collectorate up to the present time, which may be relied on as correct :—

“ Total number of gins sold—192.\* . Price of the whole Rs. 19,305.

“ The first sales were made in 1848, so that in four years the cotton dealers of this collectorate have invested 20,000 rupees in the purchase of these machines. This is, I think, a fact worth recording, and I wish you could manage to substitute it for the former incorrect allusion to the number sold.

“ 5th.—I agree entirely with you in regard to this head. Have you noticed a sad illustration of its correctness in a report published in the *Bombay Gazette* of 6th instant, of a village money-lender in the Sholapoor Collectorate having been murdered by some of his debtors, under circumstances that give strong grounds for suspecting that the whole body of villagers approved of the deed? This casual withdrawal of the curtain for a moment discloses a state of things quite appalling, if we consider the case, as it is to be feared we must, as a result of the general relations which our administration of civil justice has brought about between debtor and creditor in agricultural villages.

“ 6th.—I question the propriety of the use of the word ‘pauperism’ in the paragraph, and doubt if any inquiry would discover anywhere in the surveyed districts the existence of what is termed pauperism in Europe. I understand the word to refer to a state of things in which the able-bodied and willing to work can find no work, and would starve but for the aid of others. I cannot recollect having ever met with this in any of the surveyed districts, and should say that pauperism is unknown in them all. Pauper cultivators, in the phraseology of revenue reports, are to be met with, but these are bankrupt farmers, and they would have no difficulty in finding work as labourers. If you refer to the

\*NOTE.—Of these, five were purchased by European dealers and the rest by natives.

latter, it would be desirable, I think, to explain the sense in which you use the word.

“With these few reservations your conclusions seem to me to be as sound as the whole tone of your review is eminently fair and impartial.”

86. These extracts of Captain Wingate's letter seem to me to furnish satisfactory proof of Mr. Green's summing up being scarcely so fair towards the survey settlement as the state of the district would at that time indicate. It is exceedingly difficult to form an accurate estimate of the condition of any class of people merely from statistical and oral evidence unchecked by personal observation ; and Mr. Green was placed in this position, as I believe he never had an opportunity of visiting the interior of any of the Deccan districts.

87. Captain Wingate, on the other hand, speaks from his own personal observation, and he also alludes to some notes upon the state of the district drawn up by Mr.

\* Our present Governor Sir Bartle Frere, G.C.S.I. and K.C.B.

Frere\* from observations in a tour made through the district about this time. No one could well be better qualified to judge

of the state of this district than these officers, who had resided there almost entirely for the year or two preceding the introduction of the settlement. Carrying away with them a lively recollection of the effects of the previous mismanagement, they would naturally perceive at a glance any important changes which had taken place in the interval between their first and second visits to the district.

88. But deferring to Mr. Green's judgment, we find that he even admits that “improvement is perceptible in the style of agriculture and in the implements in use among the people—the result of increased means, and of an increase of independent feeling and energy on the part of the ryot.” And again, he says, “leaving individual cases and perhaps peculiarly unfortunate talookas, and looking to the result in the mass, there are certainly unmistakable indications to the effect that the tide is slowly turning.”

89. It seems to me, then, to be fully established that up to this time a considerable improvement had taken place in the condition of the people since the settlement had been in operation. Both Captain Wingate and Mr. Green are at one on this point. They differ, however, as to the measure of this improvement, the former giving a much broader range to it than the latter was prepared to admit.

90. The tide, which is said to have been "slowly turning" in 1852-53, has continued to flow on in a stream of prosperity, checked occasionally, however, by unpropitious seasons. The great rise in the price of grain has been instrumental in bringing about this result. The staple product (jowaree), which at this time (1852-53) was selling at the low price of 56 seers for the rupee, had risen in three years' time to 32, being an increase of 75 per cent. to the cultivators' returns. It continued pretty steadily at this price for the next six or seven years; but in 1862-63, when the great rise in cotton began to spread abroad wealth in the agricultural districts, it went up to 16, and has remained pretty much at that price ever since.

91. The completion of the made-road between Poona and Sholapoor, and its opening for traffic throughout the whole distance, which took place subsequent to the period referred to in Mr. Green's review, was also a measure which aided materially in developing the resources of Indapoor. But this great source of improvement has since been eclipsed by the opening, in 1862, of the Railway, which traverses the northern part of the district.

92. But we must turn to our statistical information to show us the effects of these important measures upon the condition of the people and the general state of the district.

93. We should naturally suppose that the first signs of an accumulation of capital amongst the agricultural class would be shown by the construction of permanent works for the improvement of the land; and accordingly we find that the repair of old and the construction of new wells early engaged attention.

94. According to a statement prepared from the Mumlutdar's records I find that at the time of settlement there were 812 wells in the district. Of these, 366, or somewhat less than one-half, were out of repair and useless. Half of these (184) have subsequently been put into working order, and 625 new wells have been constructed. The following tabular statement will serve to indicate these results more fully :—

Total No. of Wells in 1835-36.	Deduct Wells out of repair.	Remaining in working order.	Old Wells subsequently repaired.	New Wells subsequently constructed.	Total present No of Wells in working order.
812	366	446	184	625	1,255

95. The construction of 625 new wells and the repair of 184 old ones, in a district which numbered but 446 wells 30 years ago, represents a marked increase in this class of useful and productive works. Keeping pace with the growth of capital, the expansion of these permanent improvements progressed but slowly at first, six, eight, and ten being the number of new wells annually constructed, and there is one year (1846-47) when the return shows three only. Latterly however, or since 1860-61, there has been a large expenditure of capital on these works. In one year (1862-63) 66, in another 57, and taking the last six years of the lease I find that an aggregate number of 291 new wells have been opened out for irrigation.

96. We may assume that each of these new wells represents an outlay of Rs. 400. I much question, indeed, whether it would be possible to dig a well and face it with stone-pitching according to the ordinary plan of construction for that sum in the present day. A cultivator too, when a small capitalist, would, as a general rule, take a pride in building a fine well; and I am sure there are many of the new ones that I have seen which must have cost nearly double the abovementioned sum. But assuming our first estimate to be fair, the 625 new wells represent a capital of two and a half lakhs. And if we assume roughly that the repair of

the old wells has been effected at a charge of from Rs. 150 to 175 each, we may add about half a lakh more to our estimate, which would make up the outlay of capital on this source of improvement to three lakhs of rupees.

97. The building of new chowrees and dhuramsalas is another source of general improvement in which the cultivators of this district have expended some portion of their new capital. They are unremunerative works, it is true, but they add to the social comfort of the people, and to their ideas raise the general status of the village. The following is a return of the works of this description which have been recently constructed :—

Description and No. of Buildings.	Contribution by Government.	Ryots' payment.	Total Cost of Building.
	Rs.	Rs.	Rs.
Chowrees, 59.....	3,182	10,240	13,422
Dhuramsalas, 27.....	1,334	11,512	12,846
86	4,516	21,752	26,268

98. The present value of land represents another addition to the material wealth of the people of the district ascribable to the settlement. It has been shown in the first part of this report that prior to the introduction of that measure there were hundreds of acres lying waste and unprofitable which no man cared to cultivate, owing to the oppressive nature of the assessment and our defective system of revenue administration. All these broad acres have not merely been brought under tillage, and thereby rendered profitable to the State, but their occupancy right has become a valuable private property. In proof of this I would refer to the results of the several land sales which have taken place during the last two years, embodied in the following statement :—



NAME OF VILLAGES	Number of separate Sales effected	Extent and assessed Value of the Land concerned		Amount realized by Sale.		No. of years' purchase of the assessment for which Land was sold.
		Acres		Rs.		
		A. gts	Rs. a.	Rs. a.		
Indipoor .....	11	341 2	83 11	1,948 0	23	
Gachgaum .....	1	29 27	4 10	200 0	42	
Pimpice Khurd .....	2	11 21	5 10	175 0	31	
Dauz .....	5	71 4	22 1	470 0	21	
Ponowree ..	1	32 39	12 6	199 0	16	
Oodhut .....	1	11 24	5 13	160 0	27	
Pullusdeo .....	4	108 30	54 11	630 8	11	
Bigwun ..	2	23 37	6 10	20 0	3	
Kullus .....	2	78 31	22 6	150 0	7	
Rednee.....	1	30 38	7 10	100 0	13	
Neerwangee.....	1	32 6	12 1	800 0	66	
Baodch .....	3	74 55	28 8	275 0	10	
Bhat Nimbgaum.....	1	8 3	7 14	75 0	9	
Wukhoota Boodiook..	2	60 12	16 7	115 0	7	
Gopee .....	2	22 1	8 7	550 0	64	
Suratee.....	1	50 39	28 11	360 0	10	
Agolee .....	2	25 7	15 17	128 0	8	
Nimbgaum Ketkee ..	1	26 31	24 11	200 0	8	
Ajotte .....	2	71 31	18 4	300 0	16	
Muddunwarce .....	1	25 32	9 11	12 7	1	
Roorce ..	1	21 22	4 1	40 0	10	
Baboolgaumi .....	1	11 6	1 8	50 0	11	
Total...	48	1,223 30	404 12	6,897 15	....	

99. The return comprises sales effected in 22 villages scattered over different parts of the talooka, and may therefore be said to be a fair estimate of the average value of land; and according to the data therein given, the right of occupancy in land held under the settlement is now worth seventeen years' purchase of the assessment. We may

Total assessment

81,175 × 17 = 13,79,975.

consequently assume that the private property pertaining to the occupancy of land now vested in the inhabitants of the district represents a capital of upwards of thirteen and a half lakhs.

100. Combining our several estimates of the value of the permanent works and property in land created by the improvements

effected during the currency of the lease, I find that they amount to the large sum of above seventeen lakhs, as shown below :—

	Rs.
Estimated value of new wells (para. 96).....	2,50,000
Do. do. of old ones repaired (para. 96).....	50,000
Do. do. of chowrges and dhurumsalas (para. 97).	21,752
Do. do. of occupancy of land (para. 99) .....	13,79,975
<b>Total ....</b>	<b>Rs. 17,01,727</b>

101. For information as to the extent to which the floating capital of the agricultural class has been augmented by the measure, I would refer to the statement appended, exhibiting for each village of the district the result of two different census of the inhabitants, cattle, agricultural implements, carts, &c., taken respectively in 1835-36 and 1865-66. The following is a summary of the results therein detailed :—

DESCRIPTION.	Numerical Return according to Census taken in		Increase in favour of 1865-66.	
	1835-36.	1865-66.	Numerical.	Percentage.
Inhabitants .....	40,179	52,830	12,651	31
Bullocks employed in farming operations. ....	17,673	20,976	3,303	18
Cattle of other descriptions.	27,002	24,565	2,437	9 decrease.
Carts .....	291	1,165	874	300
Ploughs .....	1,454	1,820	366	25

102. Referring first to the population, which is the real motive power by which all improvements are effected, I find that the numerical difference between the two returns given is 12,752, being equivalent to an increase of 31 per cent.; or, speaking in

round numbers, we may say the population is one-third more than it was thirty years ago. As compared with other countries the ratio of increase is small. In England the population is said to double itself in rural districts in fifty years, and market-towns and large cities show a much larger increase.

103. But even with the increase noted, the present population of the district is very sparse, as it bears the low proportion of only 101 souls to the square mile. There is certainly rather an unusually large proportion of unculturable land in Indapoor; but deducting this, and making our estimate on the culturable area alone, the average number of inhabitants is still only in the ratio of 119 to the mile. This shows a marked contrast to some of the Gujerat districts, where, according to returns given in one of the recent settlement reports, there are 522 souls to the same given area; and this, I may observe, combined with the general fertility of soil, serves to explain the reason why a district in Gujerat can pay such a much larger revenue than a poor and thinly-populated Deccan district.

104. \*The census shows an addition during the thirty years of about 18 per cent. to the number of cattle used for agricultural purposes. Considering the large expansion of cultivation during the abovementioned period, the increase is less than might have been expected. The season, however, in which the enumeration was made was very unfavourable in the Kullus division of the talooka, and a good many cattle had been sent away to other districts for grazing, and a good many also sold for want of fodder. The number returned is therefore somewhat less than the cultivators' ordinary stock. But we must expect this source of floating capital to be fluctuating in a district with such an uncertain climate—to decrease, in short, in seasons of scarcity, and increase again in seasons of plenty.

105. Carts show most favourably in our return. They have increased three hundred per cent.; that is to say there were only 511 in the district in 1835-36 and there are now 1,165. I have already given an account of Lieutenant Gaisford's proceedings in

constructing a new model of a light country cart. The perfect success which has attended his exertions is shown by the remarkable fact that the old lumbering machine with stone disc wheels has disappeared from the face of the land, the present stock of 1,165 being all made after the pattern originally introduced by him.

106. These carts are not kept for agricultural purposes only, but they serve a most important end in effecting a distribution of produce, being extensively employed in the transport of grain. During great part of last season they were transporting grain from the Nuggur districts, where it was comparatively cheap and plentiful, to the drought-stricken district of Uthnee in the Belgaum Collectorate. This year their services will, I fear, be required in supplying their own districts, where unfortunately the season has been very unfavourable. This transport of grain furnishes a profitable source of employment to the cultivators, and at the time too when their services are not required for field work.

107. I trust the remarks in this chapter, though imperfect in many respects, will nevertheless have so far served the object in view as to indicate generally the effects of the settlement upon the condition of the people and the resources of the district. I shall now therefore turn to the consideration of the more immediate subject of my report, viz. the revision of the present settlement, or, in other words, the new rates of assessment to be imposed upon the district.

### PART III.—*Revision Operations and proposed Rates of Assessment.*

108. The execution of an entirely new survey of the district has been the first step taken in connection with the revision. The present settlement, as has been already explained, was based upon Mr. Pringle's survey, which, though considered a good survey at the time Messrs. Goldsmid's and Wingate's settlement operations were carried out, would be thought a very imperfect measure in the present day; and no superintendent of survey would venture to impose an assessment based upon such imperfect measurements.

109. To show the degree of accuracy considered sufficient in those days, I need only refer to Messrs. Goldsinid's and Wingate's memorandum explaining their operations. Speaking of the test or partial measurement of villages undertaken with the view of ascertaining the general correctness of the survey, they state as follows:—"If the result of this investigation tended to prove that the contents of the fields thus visited had been estimated with tolerable correctness at the time of the survey (say within ten per cent. of the truth), it was for the time assumed that the whole lands of the village had been in the first instance correctly surveyed."

110. In the present day measurements are considered faulty, in an open country like Indapoor, if errors of three per cent. are met with; and the average difference between test and original measurement is generally, as a rule, not above one per cent. in our surveys.

111. But independently of faulty measurement, the former survey was defective in other important respects. What these defects are has been already explained in a report to Government, recommending an entire re-survey of the district preliminary to the revision of rates. The following are the remarks here alluded to:—

"But independently of a want of accuracy in the actual measurement of the land, Mr. Pringle's survey was in other respects a most imperfect measure. It was confined for the most part to culturable lands, and did not generally include within its operations gairan and hill tracts. The survey officers did not consider it necessary to remedy this defect at the partial revision of the work alluded to above, and consequently there is in many cases no record in the present settlement paper of the area of the above kinds of land. The operations too were imperfect in another important respect, in that they were not executed on a plan admitting of the preparation of a village map."

112. The following statement, exhibiting the results of the measurements of part of a village according to Mr. Pringle's and

according to the present survey, may be taken as a fair specimen of the errors to be met with in the former work :—

SURVEY NUMBER.	AREA ACCORDING TO				DIFFERENCE		
	Mr Pringle's Survey.		Present Survey.		In Area.		Per Cent.
	Acres. Goontas.		Acres. Goontas.		Acres. Goontas.		
1	9	22	8	11	1	11	13
2	25	0	35	4	10	4	40
3	16	33	18	7	1	14	8
4	13	8	16	30	3	22	27
5	20	34	24	18	3	24	17
6	1	38	2	11	0	13	16
7	2	36	2	38	0	2	2
8	3	37	4	6	0	9	6
9	2	30	3	24	0	34	31
10	13	14	14	0	0	26	5
11	17	3	16	38	0	5	1
12	9	12	10	6	0	24	6
13	13	17	9	6	4	11	32
14	17	20	18	39	1	19	8
15	22	2	16	12	5	30	24
16	16	8	30	25	14	17	89
17	29	26	36	17	6	31	23
18	35	19	44	39	9	20	27
19	9	5	17	27	8	22	94
20	35	10	30	0	5	10	15

113. It is due, however, to Messrs. Goldsmid and Wingate to explain that the large errors in their survey now brought to light are not so much attributable to actual faulty measurements of individual fields, as to the circumstance of the field boundary-marks—which were not erected till the lapse of ten or twelve years after the settlement had been introduced—not having been erected according to the actual limits to which their survey was confined. No supervision being exercised over the work, and there being no maps whereby the boundaries of fields could be identified, the erection of the boundary-marks was consequently left almost entirely to the cultivators. The result was that, as a

rule, wherever gairan land adjoined a cultivated field, a portion of it was included in the boundaries of the latter.

114. This practice was carried to such an extent that

Village.	Gairan Acres included in cultivated Fields.
Bhowra ..	2,093
Kullus ..	1,863
Shetphul.	1,668
Neergoreh.	1,456

hundred of acres of gairan have been thus absorbed in many villages. A few instances of the kind are given in the margin. Where boundaries have been changed in this manner in the interval between the two surveys, there can of course be no area agreement between the two operations ; so that what appears now as a serious error in the former survey is in reality in many cases the result of the plan on which the boundary-marks were

erected. The existence, however, of such encroachments is of course one of the best reasons for a re-survey.

115. In dismissing this question of the incompleteness of the former survey, I desire to explain particularly that my remarks have been made entirely with the view of justifying the re-survey of the district, and I should be sorry indeed were they to be read as reflecting on the operations of my predecessors in the survey.

116. The question as to the plan on which the re-survey should be conducted formed a subject of considerable discussion. Captain Nasmyth, the officer in charge of the Trigonometrical Survey party in Bombay, was consulted specially upon the point as to how the work should be executed so as to be useful hereafter for the operations of his department. Colonel Rivers, who has had considerable experience in the Trigonometrical Survey, was also consulted on this point. The result of these deliberations is set forth in the following extracts of my letter upon the subject :—

“6. With regard to the plan upon which the new survey should be carried out, it has been felt that our present system of operations, though well adapted to ensure an accurate record of the extent of the sub-divisions of land com-

prised in our field survey, would be improved were our work incorporated with the Topographical Survey, so as to produce a map of the country based upon points fixed by the latter. I have been directed to consult with Captain Nasmyth, of the Trigonometrical Survey, and Colonel Rivers (who served for some time in the same department), as to the system by which the operations of the two branches of the survey could be amalgamated so as to carry out the object stated above. Both these officers have kindly drawn up a memorandum on the subject which I subjoin :—

*Captain Nasmyth's Memorandum.*

“ To make the revenue survey measurements useful to the Topographical Surveyor, it would be necessary that the former should commence from, and close upon fixed and easily recognizable points.

“ 2. Detailed instructions are given in Colonel Thuillier's Manual of Surveying ; but generally it may be remarked that the revenue surveyor ought to connect his measurements with all stations of the Trigonometrical Survey, or points fixed by it within his reach. The position of these—their latitude, longitude, and azimuth—can always be got by application to the Surveyor-General. Failing trigonometrical points in the district under survey, the revenue surveyor should connect his work with any temples, remarkable trees, or other easily recognizable points.

“ 3. The field books should be kept with scrupulous regularity, and should record the comparisons of the chain. Copies of each successive day's work should be forwarded to the Superintendent's office, where it would be examined and plotted, so that there could be no tampering with the books.

“ 4. Where angles are measured with the theodolite a similar system shall be pursued, and all observations should be taken at opposite faces of the instrument as a check upon gross errors, and to show always the state of the collimation of the instrument.



“ ‘5. The greasy pencils that are now manufactured, if used with carbonic acid paper, would admit of the registries being recorded in duplicate by one operation, and the plotting of the work from carefully kept field books might be effected at any subsequent time with as much ease as at the time of the measurements being made.

“ ‘6. There must ever be intermediate processes in the preparation of a map of the country between the trigonometrical and revenue surveys, those, viz. by which the large triangles of the former are broken up into smaller ones, the roads and rivers traversed, and the features of the country contoured; but the boundary measurements of the revenue survey might very well be turned to account, and the cost of repeating them saved.’

*Colonel Rivers' Memorandum.*

“ ‘I have read Captain Nasmyth's Memorandum on the subject of incorporating the work done by the revenue survey into a topographical survey, so as to produce a map of the country.

“ ‘2. The connecting link should, in my opinion, be traverses taken with theodolites of roads and circuit boundaries either of villages or groups of villages. These traverses should be taken by the revenue surveyors, as they will know the boundaries, but they should be checked by trigonometrical points.

“ ‘3. These points should be fixed by the trigonometrical or topographical party; there should not be fewer than one in every four square miles. Every conspicuous temple, tree, or other object should be fixed, and if no conspicuous objects exist to that amount, artificial marks should be erected. They should be entirely dependent on the principal triangles of the trigonometrical survey, and the revenue surveyors should make no attempt to lay down trigonometrical points from their chain-measured bases.

“4. Sheets with these points being supplied by the trigonometrical party to the revenue surveyors, the field work will proceed; but the field books should be sent to a mapping office, where these circuit boundaries and high roads shall be laid down by the aid of the trigonometrical points.

“5. These traverses may therefore be considered rigidly correct, and the adjoining circuits cannot fail to fit accurately, which they never would if dependent on chain-measured traverses alone.

“6. Within these boundaries the field maps of the revenue survey will now be laid down. Errors in the latter will doubtless become apparent, but the traverses will show in what direction the errors lie, and they will be reduced to an amount quite inappreciable in the mapping office.

“7. In the ordinary open country of the Deccan, having the roads, the village boundaries, and the field maps, nothing else seems required; but of course in many places sketching parties will also be required to delineate the topographical features of the country, and this should be done in sheets in which the traverses and the trigonometrical points have been laid down.’

“9. To carry out this plan of combining the operations of the two surveys, it will be necessary for me to furnish the topographical branch with an outline map, showing the circuits of villages and the points fixed. It will then remain with them to take up as many of these points as may be suitable to their work, but sufficient to ensure the preparation of a district map. In Sind the settlement and the topographical survey are carried on upon this plan. The objection to the plan in this case is, that the corrected copy of the district map cannot be prepared till the country has been topographically surveyed.”

117. The traverse survey system proposed in the correspondence quoted above has been carried out throughout the district. One of the chief results of the measure is the preparation of a dis-

strict map more accurate than any map of the kind hitherto prepared by the Revenue Survey Department. The more accurate construction of the village map has also been ensured by the measure, whilst at the same time it forms a check upon the general correctness of the aggregate detailed field measurements of the village, as any considerable difference between the total area of the village by the latter plan and its total area computed from the traverse survey would indicate faulty measurement which might not otherwise be brought to light.

118. The following comparative statement exhibits the results of the new and former survey shown in detail under the same heads :—

	GOVERNMENT LAND.				ALIENATED LAND.			Roads, Tanks, &c	Grand Total
	Culturable.	Unculturable	Gairan and unassessed.	Total.	Culturable.	Unculturable	Total.		
Present survey .....	270,076	18,095	18,679	306,850	13,854	1,163	15,017	13,805	335,672
Mr. Pringle's do. ....	238,135	17,912	43,653	299,700	13,881	765	14,646	272	314,621
Increase ... ..	31,941	183	..	7,150	..	398	368	13,533	21,051
Decrease .....	..	..	24,974	..	30	..	..	..	..

On examining this statement it will be seen that the difference in total area between the two surveys is not so much as might be expected from the faulty nature of the detailed field measurements given in paragraph 112, being only about  $6\frac{1}{2}$  per cent. There is, however, the large difference of 31,941 acres between the two returns of culturable area. This is of great importance as regards our re-assessment operations, for it shows that this large area has hitherto been held rent-free as it were, being in excess of the former assessed area.

119. The accuracy of the detailed field surveyed measurements has been ensured by a careful test taken by the European

assistant. In this operation, however, there is nothing to record as differing in any respect from the practice now generally followed in our surveys.

120. I was hopeful at first that Messrs. Goldsmid and Wingate's classification, which was a new measure and carried out regularly throughout the whole district, would serve as the basis of the new assessment. A careful examination, however, of the work has elicited considerable discrepancies in valuation. These discrepancies are attributable in many cases to the difference in area between the measurement of fields as now made and as originally recorded, adverted to in a previous paragraph. To remedy this defect I tried the plan of re-classifying all fields where the difference in area between the two surveys exceeded a given percentage. But it was found that this plan would not ensure a complete correction of the errors ascribable to this cause, and moreover it involved the rather difficult operation of adjusting the present valuation to the former standard adopted by Messrs. Goldsmid and Wingate.

121. What is here stated will perhaps be better understood if we take as an example the case of a field of which the area has been found on re-survey to be 40 instead of 30 acres, as per former survey. We may suppose the increase to be the result of a change of boundaries. It follows therefore that there are 10 acres of which no valuation was made in the former classification, but which have now to be classified, as forming an integral part of the field. Now if these 10 acres are poor soil and the rest of the field middling good, the former valuation would be incorrect, as we put a fixed average rate on each field based on an estimate of all the different varieties of soil it contains. Suppose, for instance, that the average rate of the 30 acres is 8 annas worked out by 15 shares of 2 acres each, and that 2 annas per acre is the value of the 10 additional acres. Now to arrive at an average value of the whole field, we require to add the corresponding number of shares which these 10 acres represent, which is five, to the aggregate value of the former shares. The following will be the result thus worked out :—

15 shares at an average of 8 annas	=	120
Add—		
5 do. at do.	2 do.	10
		<u>20</u>
		<u>130</u>
		<u>66</u>

122. If therefore the former rate of 8 annas per acre were applied to the 40 acres, which is the assessable area of the field according to re-survey, it would be over-assessed to the extent of  $1\frac{1}{2}$  annas per acre, which would be equal to an addition of Rs. 3-12-0 to the assessment of the whole field. Greater discrepancies than this might occur, for I have taken the case of an 8-anna field, whereas a 12-anna one might be subject to the same error in valuation from difference in area. The above, however, shows sufficiently the importance of having the classification based upon all the varieties of soil comprised within a field.

123. But besides this, Indapoor is the first district in which a regular classification of soils was attempted by the Survey Department, and the plan of operations, as may be readily supposed, was rough at first starting. We have been unable to make out, with the accuracy desirable in such matters, the precise standard of valuation adopted. It seems to have been different in the Kullus (where operations were commenced) to that of the Indapoor Division, subsequently classified. There would have been difficulty therefore, attended with the risk of inequality of assessment, if we had kept the old classification and endeavoured to adjust our valuation of fields re-classified to the same standard.

124. All things considered, it has seemed to me to be safer and more expedient in several respects to make an entirely new classification of the district based upon the improved system of operations which, with the experience of the past thirty years, has been introduced into the Survey Department since Indapoor was first classified.

125. The work has been carefully tested by an assistant, and both the Superintendent, Major Waddington, and myself have subsequently personally examined it in several villages.

126. Having explained the preliminary measures of the revision operations, I shall next proceed to show how I propose to fix the new rates, their amount, and their effect upon the revenue of the district.

127. The revision of the first of a series of revenue settlements dating back thirty years from the present time must naturally include not merely an adjustment of rates, but a consideration of the general principles upon which they were fixed. Our plan of settlement operations, though rough originally—and it may be said perhaps experimental only in Indapoor—has now been fully established; and experience, whilst giving confidence gained from successful results, has enlightened us on many points which seemed to the first projectors of the measure to be beset with difficulties. But apart from this, the principles to be made specially applicable to the revision operations now yearly to be carried out throughout the Presidency have to be defined.

128. In the first place I think it should be understood that at a revision settlement a new grouping of villages should be made, should circumstances seem to call for such a measure; and the cases will be rare, I think, where the circumstances of the district have not undergone such marked changes during the currency of the thirty years' lease as have materially altered the condition and rateable position of particular villages.

129. The chief points for consideration in the re-grouping of villages will be—the state of present communications as compared with those existing at the time of the original settlement, and the establishment of new markets, or the decline of those which were the principal ones when the first grouping took place. Many changes will be required on these accounts. The railway in some districts has not only opened out new communications, but been the means of establishing new markets; and on the other hand it has changed first-class markets into second rate ones, as with Panwell and Bhowdy in the Tanna districts, by the diversion of the traffic and trade to which they were indebted for their prosperity as market-towns.

130. No change will probably be required on account of climatic influences, though this point should be fully considered on re-assessing a district; for in the earlier fixed settlements attention was not directed to this important subject to the extent it has been latterly, and to the extent, too, that is essentially necessary for an equable distribution of rates of assessment.

131. This re-grouping should, in my opinion, be carried out generally according to the rules prescribed under this head in the following paragraph of the joint report:—

“*Para. 67.* In determining them upon the extent of the country to be assessed at uniform rates, we are of opinion that the more permanent distinctions of climate, markets, and husbandry should receive our chief attention. We should not think of imposing different rates of assessment on a tract of country similarly situated in respect to these three points, in consequence of the actual condition of the cultivators varying in different parts of it. Were we to do so, we should depart from the principle laid down by the Honourable Court of Directors of assessing land according to its capabilities, and adopt the objectionable one of doing so with reference to the means of the person holding it. The effect of such a system, by creating different rates of profits upon capital employed in agriculture, would interfere with its natural and most advantageous distribution by diverting it from land actually in cultivation to the lowly-assessed waste of those villages of which the cultivators happen to be poor. By enabling the latter to meet the Government demand without the application of the same degree of capital and skill required in the case of better cultivated villages, it would foster in the former a slovenly and unremunerative mode of husbandry. By taking into account an element so uncertain and liable to change as the condition of the cultivators in particular villages, the assessment would become less and less suitable with every improvement in their condition. On the other hand, by basing the assessment on considerations of a durable character, we have the promise of its remaining suitable for a lengthened

period, and at the expiration of the term for which it is confirmed require no further alteration than a simple increase or decrease of its amount as the exigencies of the country and Government might demand."

132. But in applying these general principles I am of opinion that we should make some special reduction to meet the circumstances of the case, when inquiry shows that a village in a certain group has not prospered to the same extent as adjoining villages of the same group, though enjoying like advantages from the *ad interim* improvements made during the lease. This should not be done, however, until a searching inquiry has been made, and it has been clearly ascertained that the original classification is correct, and upon the standard adopted in the adjoining villages.

133. If the depressed state of the village is due to the ryots being bad cultivators and not so careful of their resources as their neighbours, no reduction should be made. But if it should appear that some natural causes have operated in bringing about the result—such, for instance, as occasional flooding from the inundation of a river—I think it would be impolitic to ignore the result of thirty years' experience, and keep such a village in the class to which it would belong by the application of the rule for the sake of preserving a general uniformity of rating.

134. In the Deccan districts cases of the kind will be rare probably, but in the Concan there will, I think, be occasion for the exercise of the exceptional treatment here advocated.

135. Great care will be required of the revising officer in respect to the treatment of improvements made with the cultivator's capital. The survey rules preclude the levy of any extra assessment during the currency of a settlement lease on account of the enhanced value of land resulting from such improvements; and the same ruling has been embodied in the part of the Survey Act relating to revision operations, the following being the provision inserted in the concluding part of Section 30 :—"Such revised assessment shall be fixed, not with reference to improvements made by the owners or occupants from private capital and



resources during the currency of any settlement under this Act, but with reference to general considerations of the value of land, whether as to soil or situation, prices of produce, or facilities of communication."

136. There may perhaps be some difficulty in determining precisely the kind of improvement which is to be exempted from assessment at the revision. There are some improvements which obviously come under the rule: the construction of a new well, and the conversion thereby of dry-crop into garden land, and, in the same way, the repair of an old one during the currency of the settlement. These are both cases to which the rule is clearly applicable.

137. The planting of trees, which in some districts would give an increased value to land, is another proper exemption from enhanced assessment. And, except in cases where rules have been made specially providing for the re-survey of rice lands at the expiration of the lease, or where rice land is held under special conditions, I should consider that new rice land—made out of Jerayet or dry-crop cultivation land at the ryots' expense—is not assessable otherwise than at Jerayet rates, provided the land was so assessed under the original settlement.

138. These are clear and obvious cases, I think, in which the enhancement of assessment on account of improvements is specially barred. The class of improvements about which some doubt may perhaps exist is that affecting lands, which, originally assessed at the ordinary dry-crop rates of the district, have become valuable during the lease as building sites, owing to the increased accommodation required for an enlarged station, or other similar causes. Such is the case with the lands in the vicinity of Poona. This special value being, however, attributable to extraneous circumstances, and to improvements which have been brought about mainly at the expense of the State, I am of opinion that enhancement of rates is perfectly justifiable in such cases:

139. The enhancement should, however, be regulated by a general rate applicable to building ground, and not by a special one

for each case. If the latter course were adopted, and a higher rate imposed with reference to the character of the building and its rateable value, we should then be departing from the leading principle of the rule, and taxing individual improvements.

140. This question of charging an increased rate for land when appropriated to building purposes or utilised for quarrying is treated of under Section 35 of the Survey Act. The rules formed under the provisions of this section provide for the levy of a certain charge, regulated by the character of the district, when land is appropriated to either of the above purposes. These rules will have effect during the currency of present leases, but at their expiration I think a building rate is to be preferred to an upset payment. Under the section referred to the assessment of land appropriated to the purposes indicated above is declared to be "liable to revision at any future settlement of the district." This, I think, renders legal the imposition hereafter of a building rate separate from the land assessment, as advocated above.

141. The foregoing suggestions appear to me to embrace the main principles by which our revision operations should be guided, and I shall now endeavour to show how they should be combined in the revision of the Indapoor rates with the other circumstances affecting the question. •

142. I shall take up the general question of communications first. A marked change in this respect has taken place during the thirty years. When the settlement was introduced there was not a mile of made road in the district. The first great improvement was in the construction of the present imperial line of road from Poona to Sholapoor, which runs through the centre of the district passing by the town of Indapoor. From its construction till the opening of the railway (to be alluded to in the sequel) this road has been an immense advantage to the district, and is so still indeed, though its importance has been materially diminished by the latter more civilized means of communication.

143. The road has served not merely as the means of bringing Poona, which is the great grain market of this part of the

Deccan, and to which all the other markets are more or less subsidiary, within easy means of transport for grain, but it has brought great part of the villages of the district in direct communication with their own great local market. \* It has also been the means of establishing a regular cart traffic between Poona and Sholapoor, which has enabled the ryots to take advantage of any rise in either of these markets when their own has been glutted or unduly depressed.

144. The opening, however, of the railway line from Poona to Sholapoor in 1863 has had a great effect, not merely on the Poona road, but upon markets and prices also. The railway, as was to be expected, has driven the cartman off the road, and monopolized his perquisites ; and so long as its rates are fairly regulated with reference to the value of produce, as well as its transport cost by road, the Company will remain the great market carriers of the produce of this district. \*

145. The diminution of traffic upon this line of road has considerably affected the importance of Indapoor as a market-town generally. Situated midway between Sholapoor and Poona, dealers exporting produce to either station would naturally try the half-way market. Many a maund of grain and many a cart-load of merchandize intended for one or other of the above markets has been disposed of in transit at Indapoor, and the return carts laden with some articles of produce which would command a better price in the respective markets. The general business of the place has certainly suffered from the causes here alluded to, though as a local market it is still almost as important as ever, commanding the produce of the district generally. I should consider therefore that, as regards our new rates, the market may be said to be as important as it was thirty years since, though it has somewhat declined since the railway was opened. \*

146. A great revolution has taken place in the price of grain during the currency of the lease. We learn from the reports of the survey officers that jowaree, the staple product of the district, was selling at 60 seers the rupee in the year in which their rates were introduced ; the average price of the five years preceding is said

to have been 53 seers per rupee. The following table exhibits the average yearly price in the Indapoor market during the currency of the lease:

Year,	Jowaree, No. of Seers per Rupee.	Bajree, No. of Seers per Rupee.	Year.	Jowaree, No. of Seers per Rupee.	Bajree, No. of Seers per Rupee.	Year.	Jowaree, No. of Seers per Rupee.	Bajree, No. of Seers per Rupee.
1836-37	43	34	1846-47	15	13	1856-57	32	28
1837-38	36	44	1847-48	48	32	1857-58	39	37
1838-39	67	30	1848-49	72	56	1858-59	32	28
1839-40	44	30	1849-50	72	56½	1859-60	39	31
1840-41	61	44	1850-51	38	34	1860-61	33	23
1841-42	56	40	1851-52	40	32	1861-62	27	19
1842-43	68	42	1852-53	56	40	1862-63	16	16
1843-44	72	44	1853-54	56	36	1863-64	13	12
1844-45	60	36	1854-55	29	26	1864-65	16	14
1845-46	36	25	1855-56	32	29	1865-66	18	15
'Ten years' average.	56½	37	'Ten years' average.	45½	35½	'Ten years' average.	26½	22

147. During the first ten years of the lease but little change took place. Prices ranged from 72 seers in 1843-44 to 36 in 1845-46, whilst the average for this decennial period is 56½. The first year in the next decennial series was a most unfavourable season, and grain rose to the rate of 15 seers the rupee. It speedily fell again, and had gone down to 72 in 1849 and 1850. A steady increase set in, from this date, and it was selling at 32 in 1855-56. The average for this period is 45½.

148. Beginning with 32 seers in the last decennial period of the lease, but little fluctuation occurred during the earlier years, and down to so late as 1861-62 27 seers was the ruling rate. The general rise of prices which has spread throughout the Presidency dates from this period. Its effect was felt here, 16 seers being the rate in 1862-63, and there has been but little change since. The average price for this period is 26½ seers.

149. We must consider present prices to be exceptional—to be the effect in fact of that commercial prosperity which has resulted from the American War. The export of cotton from that country being suspended by the war, India was called upon to furnish the supply required for the English market, and she set herself vigorously to the cultivation of that product. Indapoor is naturally not a cotton-growing district, but reports of the large profits realized from its cultivation having reached the ryots, they naturally turned their attention to its growth; and from returns obtained from the Mamlutdar, I find the large area of 30,049 acres is under cotton cultivation this year. A considerable area has thus been diverted from the growth of grain during the last few years. With a diminished supply there has been increased consumption, consequent on the spread of that wealth which has been poured into the country by the large profits realized from cotton. These causes operating together have been mainly instrumental in bringing about the present high prices, which therefore I think it safe to consider exceptional.

150. To sum up the results of the changes affecting the new rates which have taken place during the lease, grain has risen from 66 to 55 seers the rupee; or, taking the average of the last ten years, the rise will be from 66 to 26, which is equivalent to above 150 per cent. It is difficult to put a special value upon the increased facilities of transport resulting from the *ad interim* improvements. There is no doubt they have aided materially in bringing about the rise in the price of grain, and may therefore be included generally under the advantages which are ascribable to that measure.

151. The climate of Indapoor has unfortunately, however, prevented the cultivators from realizing that material wealth which is indicated by the immense rise in price of grain referred to above. The rain-fall is most precarious. For two and three consecutive years together it is either insufficient, or the falls so untimely, and at such long intervals apart, that no crop is brought to maturity. Such has been the case with part of the Kullas division. A good average crop every other year is too liberal an allowance as an

average of the general run of seasons. From the Jummabundy reports it would appear that the cultivators get a good crop about once in three years ; that of the other two, one is a year of almost complete failure, and one of middling crops only.

152. It is only within the last few years that pluviometers for gauging the rain-fall have been introduced into inland districts. I have been able to get but five years' returns for Indapoor, which give the following result :---

	In.	cts.
Year of 1861-62, total fall gauged ..	2	50
Do. 1862-63, no return .....	0	0
Do. 1863-64, total fall gauged ..	3	18
Do. 1864-65, do. ..	11	40
Do. 1865-66, do. ..	6	95
Do. 1866-67, do. ..	5	24.
	<hr/>	<hr/>
	29	27
	<hr/>	<hr/>
Average fall for the five years. .	5	85

This speaks volumes regarding the climate ; for what can be said of a district which has an average rain-fall of somewhat less than six inches per annum !

153. But it will be said that the climate is no worse now than it was thirty years ago, and consequently that this point does not affect the question of what the present rates should be. I admit this, but at the same time think it is necessary for me to explain to how great an extent its uncertainty has affected the condition of the people by operating against the benefits which would otherwise have accrued to them from the rise in prices. The problem then which we have to solve is this—when, or at what period during the currency of the lease, had the cultivators acquired *that amount of capital* which is essentially necessary for the proper cultivation of the land and their own well-being, and what was the price of grain at that time ?

154. I think it has been fully established in the review of the settlement that, at the end of the first decennial period, the

cultivators were not in a position to pay a higher assessment had a revision taken place at that time. The average price of grain for the ten years is 56 seers per rupee ; consequently we may conclude that the assessment was not light when gauged by the prices of that period.

155. In our remarks upon Mr. Green's review, which took place six years after in 1852-53, we have come to the conclusion that though a decided improvement in the condition of the people was noticeable at that period, no considerable accumulation of capital had taken place. The turning point had been past, and the steady rise in prices which set in from that date soon made a marked change in the state of the district. The revenue was being regularly paid without remissions, and as indifferent seasons occurred at that time, its payment shows that the cultivators had some funds to fall back upon, and were not entirely dependent on the crop of the year.

156. I think therefore we may fairly assume that towards the latter end of the second decennial period the cultivators had acquired *that amount of capital and that well-to-do position* which we would assign to them as the measure of profit to be left after payment of the Government assessment. I am consequently of opinion that we may take the average price of grain during the latter half of the second decennial series as the index by which we may estimate from prices what our present assessment ought to be. In other words the percentage increase which has taken place during the last ten years will represent generally the percentage addition to the present assessment which may now be made.

157. Applying this rule to the case, I find the average price of grain for the two periods indicated stood as follows, viz:—

Average for the last five years of the second decennial series,	
viz. from 1851-52 (dating from the period of Mr. Green's	
review) to 1855-66 .....	42
Ditto for the ten years, from 1855-56 to 1865-66..	26

We may assume approximately therefore that between 50 and 60 per cent. is the addition (considered solely with reference to the price of grain) which may now be made to the present assessment.

158. I find that a maximum rate of one rupee per acre, with a reduction of 2 annas for some villages and a special increase of 2 annas for Indapoor itself (details to be explained in the sequel), will give about the required amount of assessment. Twelve annas is the maximum on which the present assessment is based. An increase to a rupee is equivalent to an addition of 33 per cent. only. But it has been shown that according to the new survey a considerable extent of land has hitherto been held in excess of the assessed area. The assessment now placed upon this, and the assessment resulting from the adoption of a comparatively higher standard of valuation for the best soils, form a special fund of increase to our new settlement. And these sources, swelling the general amount, raise the percentage increase higher than is indicated by the difference between a twelve and a rupee maximum rate. That is to say by the application of the latter rate to new measurements and new classification the assessment will be raised to 53 instead of 33 per cent., which is the actual difference between the two given rates.

159. I have satisfied myself by inquiries, as well as by returns of the state of the crops, that the rain-fall is not equable throughout. It is evidently somewhat larger and more certain in the south-east corner of the talooka, extending beyond Indapoor, and embracing the country along the banks of the Bheema, than in the western part of the district, extending from beyond Kullus, to the Baramuttee villages. The three last seasons furnish striking examples of this. Round about Indapoor, and in the tract of country first indicated, the rain-fall though small has been timely and sufficient to ensure an average good crop, whilst for the same period there has been almost an entire failure in the villages round about Kullus.

160. It has been suggested to me that the more certain rain-fall in the part of the district referred to is ascribable to its position



with reference to the Mhadeo Hills in the Sattara Collectorate. The rain-clouds, gathering round their summit in the monsoon, pass off into the plain in a south-westerly direction, which brings them over this corner of the Indapoor district; whilst on the other hand the Kullus part of it lies too far west to come within the bearing of the south-west wind blowing over these hills. This doubtless is one of the reasons to which this change may be ascribed; but the whole valley bordering on the Bheema River seems to get more late as well as more early rain than the villages near Kullus alluded to above. I may not have indicated the real cause of this difference in the rain-fall, but that a difference does exist is beyond doubt, and I consider that it forms good grounds for fixing a lower rate for this part of the district.

161. There are 13 villages thus circumstanced for which I propose a maximum rate of 14 annas only, whilst for the rest of the district my rate is a rupee. Owing, however, to the advantage which the cultivators of Indapoor derive from their own market-town, I propose an addition of 2 annas to the rate of that village, which consequently will be Rs. 1-2-0.

162. But besides the regular Jerayet or dry-crop cultivation for which the abovementioned rates have been fixed, there is a small extent of land immediately on the banks of the Bheema River which is annually flooded by the flushes of the river during the monsoon season. This flooding has a very fertilizing effect, and moreover renders the cultivation of this tract certain and independent of the regular rain-fall. Hitherto in the Deccan districts we have made the rates of this land 4 annas in the rupee, or 25 per cent. higher than the Jerayet rate of the village. Experience has satisfied me that this is relatively a much lower rate than it should bear. I propose therefore to make an addition of 50 per cent. to my Jerayet rate in the present case; that is to say to make Rs. 1-8-0 the maximum for this flooded land. Even this is below the mark; but I think it politic to let the cultivators have this land at favourable rates, for it forms a small reserve which helps to feed their resources when the crops upon the ordinary Jerayet land fail.

163. I am unable to show the exact amount of the new assessment according to my proposed rates, as, owing to the classification of the district having only just been completed, there has not been time to calculate the assessment for each village in the regular way. But the following statement, compiled from the detailed returns, gives an abstract of the approximate result which has been worked out from the rough classification papers:—

	Cultivated Land.	Waste Land.	Total.
Assessment according to proposed rates	124,506	194	124,700
Do. present do.*	81,184	207	81,391
	<hr/> 43,322	<hr/> 13	<hr/> 43,309

According to this statement the new rates will make an addition of 57 per cent. to the present assessment of the district. But with this addition the average rate upon the whole culturable area will still be only 7 annas 8 pies per acre.

164. The rate of increase varies considerably in individual villages. In one case it amounts to 150, in several it is about 100, and in some it is only 17 and 18 per cent. Amongst the Rupee class villages it ranges generally from 50 to 100 per cent. The village of Nimbgaum Ketgee, near Inda-poor, shows one of the smallest increases.

† 18 per cent. This is owing to its having a considerable extent of well-garden land, bearing a special rate for which there is no corresponding entry in the new assessment, as no special rate (as will be shown presently) will be placed upon wells in future.

165. In the 14-anna rate villages the increase varies generally from 25 to 50 per cent. There are one or two places where it is less, and one or two cases where it is more than the abovementioned rate. This variation in undivided villages is attributable to the difference between the new and the former survey, and the difference also between the two standards of classification. There

\* The collection last year amounted to Rs. 83,502, but this includes Rs. 2,310 realized from sundry sources, independent of the regular assessment, and our comparative statement is confined to the latter account.

can be no doubt of the fairness of charging for land when proved by actual survey to be either in excess of former recorded area, or to have been undervalued originally.

166. With regard to the recent classification, I should here explain that great care has been taken to keep down the valuation of the lower orders of soil. A lower scale of values has been adopted, specially for them, and this will have the effect of making them lower upon the Rupee than under the former 12-anna scale. During the course of my inquiries about the present rates on different soils, I was frequently asked what I intended doing with the poor burruuds; for although the cultivators about Indapoor seem to be prepared to expect a general increase of about 50 per cent., the prevailing opinion appeared to be that none of this increase should fall upon the poor soils; and such will be the effect of our recent classification operations.

167: There has for some time been a general impression abroad that our survey rates in many of the early-settled districts have been pitched proportionately higher on the poor than on the good soils; and experience has led me to think that there are grounds for supposing this to have been the case to some extent. I have borne this in mind in revising the rates of the district, and am satisfied that no complaints of the kind will be tenable against the classification operations as carried out in Indapoor.

168. But besides prices, we have other collateral evidence which tends materially to confirm my opinion of the suitability of the rates of assessment now proposed.\* The evidence here alluded to is that which is supplied by rates introduced in adjoining districts subsequent to the date of the Indapoor settlement.

169. The first case I would cite is that of the Korte Talooka, belonging to the Ahmednuggur Collectorate, which was settled by Captain (now Colonel) George Anderson in 1853. His maximum rate for the villages bordering on Indapoor was only 12 annas. One rupee was the highest rate imposed in the Talooka, but owing to the bad climate of the villages referred to there, their rate was reduced to 12 annas.

170. The settlement of Indapoor is alluded to in the following remarks:—

“So far as I could ascertain from inquiries made during the settlement, the ryots of the survey districts on the other side of the Bheema appear to have derived much benefit from the revised assessment, and I am inclined to hope that the new rates will prove equally beneficial in Kortee. In Indapoor especially the ryots, so far as I could learn, are thriving and contented. In Hingnee—one of the Kortee villages settled by me—a ryot of Indapoor was found to be cultivating 82 acres of land. He told me that all the land in his own village had been taken up for cultivation; he could only, on becoming more prosperous, enlarge his farming operations by crossing the river and taking up land in Kortee. He now travels on horseback from one village to the other, and I daresay considers himself quite a gentleman farmer.”

171. Captain Anderson had access to the records of the Indapoor settlement. His proceedings in Kortee may therefore be taken as evidence that up to the period referred to (1853) Indapoor did not show such marked improvement in its condition as to render it advisable to impose a higher rate in an adjoining district of similar climate and capabilities.

172. Indapoor is bounded on the north by the Sattara districts, which have been comparatively recently surveyed and assessed by the Survey Department under Colonel W. C. Anderson, the present Survey Commissioner of that Collectorate. Referring to his operations I find that the Nateepootee Division of the Khatao Talooka, which adjoins the Bheema on the borders of the Indapoor Talooka, was assessed in 1858-59 at a maximum rate of a rupee; and the same maximum was applied in the following year to the tract of country, belonging to the same talooka, lying between the Mhadeo Ghats and the Neera River, and extending to the Phultan Desh on the west. I should be inclined to think that the circumstance of part of this last-mentioned district being nearer to the Mhadeo Hills may possibly give it some little superiority in point of climate over the western part of Indapoor, which it

adjoins. Both are proverbially drought-stricken districts, and this is especially the case with the country near Phultan. It is an old saying in the country that rain never falls in the Phultan Desh. This of course is metaphorical, though it is wonderful how little does fall in that ill-favoured country.

173. Prices, it is true, have gone up a little since these districts were assessed, but, as already explained, they have been in an exceptional state lately, and it would be unsafe to take the three or four last years' returns as the basis for a settlement to be fixed for 30 years. The prices of 1857-58 and 1858-59 are the average upon which my rates have been fixed; and as Colonel Anderson's settlements, made at that time upon a Rupee maximum, are working well, there is every reason to suppose that Indapoor, with its more favourable position in regard to markets and communications, can bear the same rate.

174. With regard to the assessment of well-garden land, it has been already shown by extracts from the correspondence upon the present assessment that there was at that time (1836-37) a diversity of opinion upon this subject; Government apparently retaining their objections to the measure, but giving their consent to it on the understanding that the rate was fixed so low that the cultivators would readily pay it. The plan of fixing a low rate has been carefully observed throughout our well-assessment operations, and this course has, no doubt, prevented any opposition to the measure.

175. The cultivators seem to have been impressed with the belief that the guarantee given in the joint report rules, exempting new wells from assessment, would extend only to the end of the present lease. Considering therefore the large number of new wells which have been constructed—as shown in a preceding paragraph—under such a conditional arrangement, I think the time has come for us to declare that henceforth no extra assessment will be placed on well-garden cultivation; and such an assurance would greatly stimulate a further outlay of capital in the construction of this class of permanent and useful works.

176. It is almost impossible to overrate the importance of well cultivation in a drought-stricken district like Indapoor. When the country is parched and unproductive from the want of the monsoon rain-fall, little spots of cultivation may be seen here and there dotted about the low-lying lands of the village. This cultivation, which is the product of the small supply of water stored in the wells, is often the sole product of the village in such seasons.

177. There may be financial difficulties in disposing of the existing assessment on well-garden cultivation in some districts, and I would not therefore ask for any general ruling applicable to all cases. But as there is no such difficulty in Indapoor, and as Government have recently expressed their wish to have present practice in assessing well cultivation modified, I feel no hesitation in proposing the entire abolition of the special cess in this case.

178. The course adopted by me is to put the first class Jerayet rate upon all land capable of being irrigated from existing wells, irrespective of the value assigned to it by the Jerayet classification. But when the land has been classed at the full Jerayet rate, no addition has been made in consideration of its being irrigated by a well. Government wish a general addition to be made to the Jerayet rates of all lands possessing a water-bearing stratum; but it is almost impossible, I think, to work out this plan in the ever-varying soil of the Deccan. I have therefore taken existing wells as the guide, and considered only the land under them as having a water stratum.

179. The assessment given in a former para. represents the amount of imperial land revenue imposed upon the district; but in addition to, and independent of this, a separate cess of one anna per rupee will be levied for local improvements. Section 29 of the Survey Act provides that the guarantee given to a settlement shall be limited to the imperial land revenue, the Governor in Council being empowered to impose any cess that may be deemed requisite for local improvements. I cannot help thinking that this power of increasing the demand upon the land by the imposition

at any time of a special cess will have an injurious effect, for it is entirely subversive of that guarantee which has been one of the main sources of the popularity and success of our present settlements. I refer to the guarantee of no addition being made to an assessment during the currency of a settlement lease. I fear our agricultural classes will not understand the distinction between imperial and local land revenue, as laid down in the Act; and any addition made to the latter by the imposition of a special cess after the introduction of a settlement would assuredly create a feeling of general distrust.

180. It appears to me that the provision for increasing the revenue for local purposes, contemplated in the Act, is a condition which might fairly be reserved to the State were a permanent settlement to be introduced. But in a 30 years' lease I think it is a matter of the greatest importance that the full demand to be realized, imperial as well as local revenue, should be declared, and the provision referred to does not appear to me to preclude the adoption of this course, for the Governor in Council, in the exercise of the right reserved, may, in my opinion, declare that, for a stipulated period at least, no addition shall be made to the local, in the same way as with the imperial, land revenue. I would urge the adoption of this course for Indapoor, one anna being declared to be the maximum amount leviable during the new lease.

181. At the time the present assessment was introduced the question was warmly discussed, as to whether the settlement lease should be given for ten or for thirty years, and, as has been already explained, the decision was eventually in favour of the latter period. If there be any question in the matter now, it would be whether we should renew our agreements with the cultivators for thirty years, or adopt a permanent settlement.

182. The question of a permanent settlement has been a fruitful topic of discussion of late years, especially since the advocacy of the measure by the late Colonel Baird Smith in his able report on the Famine of 1860-61 in the Bengal districts. The sacrifice of public revenue which is involved in debarring the

State from any share of the increase in the rentable value of land resulting from a rise in the price of agricultural produce, is the great objection urged against the measure; and in the districts in this Presidency, where an extremely light assessment has been fixed, it would apply with great force. It would appear, however, from Colonel Baird Smith's remarks, that the state of things is altogether different in the provinces of Bengal, for the assessment seems to have been already fixed there at the full measure of the State's demand.

183. Referring to this point Colonel Baird Smith observes—

“ It may be supposed that a great sacrifice of public revenue is involved in the concession of a perpetually fixed demand on the part of Government. It is to be observed, however, that (with a single exception to be noticed separately) the recent tendency of the measures of Government has shown a different conviction, and indicated a belief that its interests are best secured, not by general enhancement, but by general lightening of its demand on the land. The latest order under which settlements now in progress are conducted prescribe a reduction of the proportion of the rent or net produce hitherto appropriated as Government revenue from 66 to 50 per cent; and I have no doubt that this is a wise and prudent step, sure to justify itself before many years pass away. It is scarcely possible indeed that a tax on rent which, even at its minimum, absorbs half that product, and presses exclusively on a single section of the community, can be permitted to increase. The tendency will, I believe, be quite in the opposite direction, and instead of desiring to raise the moderately assessed districts to the level of the highest, the best revenue authorities will probably seek to lighten the pressure on the latter, and in this manner, rather than by the converse process, to equalise the burden generally.”

184. There is a marked difference then between the Bengal districts, for which the permanent settlement was proposed, and our Presidency generally as regards the pitch of assessment originally imposed. Indapoor, which we are now revising, is naturally



one of our least favoured districts. Its average rain-fall is so short and uncertain that I have now been required to discount liberally on this account ; but still circumstances, in my opinion, have fully justified the imposition of an increase of above 50 per cent. in that case even. In other districts (where the assessment will soon come round for revision) enjoying a certain and fair average rain-fall, as the province of the Southern Maratha Country for instance, the future increase to the public revenue is probably not over-stated in being estimated at 100 per cent., and the rates which will give this increase will still leave the cultivators a full and ample margin of profit for the acquisition of capital. \*

185. But after making this increase, are there not good grounds for supposing that, on the return of another revision at the expiration of thirty years, we may again legitimately increase our demand upon the land? No one, I should think, would venture to state that a maximum rate of one rupee per acre represents, notwithstanding its precarious climate, the full assessment which Indapoor can bear. I cannot see that the State is called upon to forego these prospective advantages. The public expenditure connected with the Government of the country is annually increasing, but our annual revenue has not of late kept pace with the demands upon it. It seems to me, in short, that it would be almost as unreasonable to ask the Chancellor of the Exchequer to fix the excise taxes in perpetuity, as to require the Bombay Government to introduce a perpetually fixed demand upon the land!

186. I would therefore recommend that the proposed assessment of Indapoor be declared permanent and unalterable for the term of thirty years.

187. I have now explained all my proposals affecting the revision of the present assessment ; but before closing this report I would offer a few remarks on questions affecting the success of the settlement and the well-being of the people.

#### *General Remarks.*

188. It will, I trust, have been made evident, from the general tenor of my remarks, that a remarkably short and capricious

rain-fall has had a very material effect in retarding the prosperity of the Indapoor district. In short, that, unless we can cure this lasting defect, it can never attain to a permanent state of prosperity. Capital will accumulate in cycles of good seasons, to disappear again, however, to a considerable extent as each unfavourable cycle comes round.

189. Irrigation is the only means of remedying this defect ; and I would here draw attention to the importance to this district

of a project \* recently brought forward by  
 \* See Government Selections, Irrigation Series No. II Colonel Fife for damming up the Moota River in a locality about 12 miles west of

Poona. It is calculated that the head of water which will be raised by this work will furnish a supply for irrigating the country from Poona to a distance of nearly 100 miles eastward, extending throughout a considerable tract of Indapoor. To a drought-stricken district irrigation, which will afford a supply to compensate only for the regular rain-fall, will be inordinately valuable. But how incomparably greater will the value of a supply which can be obtained after the season for the monsoon falls is past ; and Colonel Fife's project would do this. It would supply water sufficient for raising a rubber crop ; and instead of Indapoor being at this season a parched and barren-looking country, with scarcely a trace of vegetation, we should see crops ripening with the golden autumn tint upon them.

190. I have estimated that 2 rupees per acre might be levied as an average rate for all lands for which water would be available for a rubber crop. The estimated supply would raise the average outturn fully tenfold in excess of the ordinary monsoon crop produced. Instead of having to fight against seasons, pledging his land to the money-lender in bad, and paying off the debt in good, the cultivator could calculate on his regular annual return of produce, and would soon become independent of such pernicious assistance.

191. But besides the actual supply of water obtainable from the canal, an increased supply would be afforded to the wells of

the district by percolation from the canal. A striking example of this, connected with the new Jamda Canal in the Khandeish Collectorate, has recently come under notice. Wells that were dry before the canal was opened have now a good supply; nullas which had ordinarily little or no water at this season have a good running stream in them; and thus not only directly, by means of its canal, but indirectly also has this work been the means of spreading a supply of water throughout the country; and equally important results may be expected to follow upon the extension of Colonel Fife's project to the Indapoor district.

192. Supplemented by a work of this kind, the district would rapidly attain to a state of prosperity under the assessment now proposed. The horrors of famine would for ever be averted; and the people, whilst accumulating wealth, would become large contributors of the articles of export produce, and consumers in an equal degree of the manufactured imports—the cotton and the woollen goods, and the hardware articles—which form the staple wealth of the British manufacturer.

193. I cannot conclude without expressing my apprehensions that in this review of the Indapoor settlement I have not done justice to the services of Messrs. Goldsmid and Wingate, the great pioneers of that system of survey and settlement, which, originating in Indapoor, has now been extended with most beneficial results throughout the length and breadth of the Presidency. Death has long since laid his hand upon the former. Suffering from an acute disease, he was proceeding to England for the recovery of his health, but midway between the land of his labour and the land of his birth he was summoned to his last home, and has been laid to rest in the cemetery in Cairo. But though dead to fame, the name of Goldsmid—"Nana Sahib", as he is familiarly styled in Indapoor—is regarded with feelings of veneration and the deepest respect by the ryots of that district as the great reformer of abuses, and the originator of the "Paimash" settlement.

194. Lieutenant Wingate, speaking of him as in the time of the Indapoor settlement, after serving with marked distinction for

some years in the Survey Department, maturing its operations, and inaugurating many useful reforms in the revenue system of the Presidency, eventually retired from the service in 1853. Living in retirement from public life, his valuable services in this country had long remained unacknowledged by the State; but on the recent creation of additional classes of the Exalted Order of the Star of India, it was pleasing to his many friends in this country to find his name amongst the list of the distinguished servants of the State whom Her Majesty has been graciously pleased to appoint to be Knights Commanders of the Exalted Order of the Star of India.

I have the honour to be,

Sir,

Your most obedient Servant,

J. FRANCIS, Lieut Colonel,  
Survey and Settlement Commissioner.

**STATEMENT contrasting present and proposed Assessment for  
Villages belonging to the Indapoor Talooka.**

Number.	NAMES OF VILLAGES	Present Assessment according to Cultivation Returns for the year 1865-66		Proposed Assessment calculated on the Area under Cultivation in 1865-66.		Increase in Area and Assessment according to proposed Settlement.		Percentage Increase.		
		Acres.	Rupces	Acres.	Rupces.	Area	Assessment, Rupces.	Area	Assessment, Rupces	
1	Indapoor . . . . .	16,024	4,981	19,113	7,372	3,115	2,391	21	48	Maximum rate Rs. 1-2-0
2	Shah . . . . .	1,140	400	1,838	803	398	403	27	101	Do. Rs. 1
3	Kanndulgaon . . . . .	2,638	928	2,861	1,421	223	496	8	53	Do. do.
4	Turigaon . . . . .	553	219	623	367	70	118	13	48	Do. do.
5	Heengungaon . . . . .	1,589	553	1,789	997	200	444	13	80	Do. do.
6	Baboolgaon . . . . .	2,214	741	2,161	1,401	217	660	10	89	Do. do.
7	Bhatnimgaon . . . . .	1,170	415	1,723	926	253	511	17	123	Do. do.
8	Bedsingh . . . . .	902	292	988	522	86	230	10	79	Do. do.
9	Owsuree . . . . .	1,928	1,653	2,200	1,111	272	458	14	70	Do. do.
10	Bhandgaon . . . . .	2,888	1,242	2,999	1,914	111	672	4	55	Do. do.
11	Bhowreh . . . . .	17,318	6,787	18,503	10,780	1,155	3,993	7	59	Do. do.
12	Wajreh . . . . .	625	258	686	353	61	95	10	37	Do. do.
13	Gopee . . . . .	948	426	1,027	501	79	75	8	18	Do. do.
14	Loomewaree . . . . .	1,310	726	1,410	883	70	157	5	22	Do. do.
15	Suratee . . . . .	1,668	905	1,732	1,272	64	367	4	41	Do. do.
16	Neerneemgaon . . . . .	1,357	601	1,415	906	58	305	4	51	Do. do.
17	Chakatee . . . . .	1,650	684	1,824	931	174	267	11	39	Do. do.
18	Rednee . . . . .	3,746	1,415	4,212	2,163	466	712	12	49	Do. do.
19	Redah . . . . .	1,909	589	1,994	906	85	317	4	54	Do. do.
20	Setphal . . . . .	3,510	1,394	3,599	2,051	89	660	2	47	Do. do.
21	Kathee . . . . .	3,947	1,121	4,117	1,671	170	550	4	49	Do. do.
22	Peetkeshwur . . . . .	1,962	585	2,206	789	244	204	12	35	Do. do.
23	Neemgaon Ketkee . . . . .	7,574	2,212	8,252	2,657	678	445	9	20	Do. do.
24	Gokhlee . . . . .	1,511	272	1,922	537	411	265	27	97	Do. do.

Number.	NAMES OF VILLAGES.	Present Assessment according to Cultivation Returns for the year 1865-66		Proposed Assessment calculated on the Area under Cultivation in 1865-66.		Increase in Area and Assessment according to proposed Settlement.		Percentage Increase.		
		Acres.	Rupces.	Acres.	Rupces.	Area.	Assessment, Rupces	Area.	Assessment, Rupces	
25	Wungulee.....	811	182	1,110	366	299	184	37	101	Maximum rate Rs. 1.
26	Rajehwarce .....	309	63	434	157	125	94	40	149	Do. do.
27	Gagurgaon .....	733	180	950	369	217	189	30	105	Do. do.
28	Beejowdee .....	1,961	360	2,745	710	784	350	40	98	Do. do.
29	Bulpooree.....	966	213	1,491	277	525	64	54	30	Do. do.
30	Bhowree .....	1,286	469	1,428	784	142	315	11	67	Do. do.
31	Chandgaon .....	1,025	416	1,164	774	139	358	14	87	Do. do.
32	Wurkoteh (Bk)..	14,322	1,194	49,592	2,287	630	1,093	15	92	Do. do.
33	Agotee.....	1,853	715	1,941	1,254	91	539	5	75	Do. do.
34	Gunjeeuwulun ....	1,251	488	1,458	999	207	511	17	105	Do. do.
35	Kulasee.....	2,002	726	2,182	1,181	180	455	9	63	Do. do.
36	Kaltun .....	3,386	1,254	3,880	2,121	494	867	15	69	Do. do.
37	Scersoorree .....	1,824	604	2,186	1,124	362	520	20	86	Do. do.
38	Parusthul.....	1,557	578	1,768	1,009	211	431	14	75	Do. do.
39	Ajotee .....	1,438	559	1,559	1,125	121	566	8	101	Do. do.
40	Soogaon .....	1,288	533	1,436	931	148	398	11	75	Do. do.
41	Pimpree (Khoord).	945	217	1,139	366	194	149	2	69	Do. do.
42	Kullus .....	9,655	2,744	12,396	3,767	2,741	1,023	28	37	Do. do.
43	Rooee .....	4,301	1,058	4,544	1,535	243	477	6	45	Do. do.
44	Vehalee.....	2,193	608	2,505	823	312	215	14	35	Do. do.
45	Gotoondee .....	3,248	836	3,558	1,469	310	633	10	76	Do. do.
46	Shelgaon .....	11,032	3,384	12,580	5,095	1,548	1,711	14	51	Do. do.
47	Hatoorneh .....	4,956	1,266	5,547	2,090	591	824	12	65	14 annas is the maximum rate for these villages.
48	Lascorneh .....	8,153	2,396	8,643	3,836	490	1,440	6	60	
49	Kulumb .....	5,539	2,400	5,930	3,511	391	1,111	7	46	
50	Cheeklee .....	669	298	712	423	43	125	7	42	
51	Kurowlee .....	1,517	716	1,565	988	48	272	3	38	
52	Jamb .....	1,171	393	1,228	658	57	265	5	68	

Number.	NAMES OF VILLAGES	Present Assessment according to Cultivation Returns for the year 1865-66.		Proposed Assessment calculated on the Area under Cultivation in 1865-66.		Increase in Area and Assessment according to proposed Settlement.		Percentage Increase.		
		Acres.	Rupees.	Acres.	Rupees.	Area.	Assessment, Rupees	Area.	Assessment, Rupees	
53	Oodhut .....	1,390	685	1,485	862	95	117	7	26	14 annas is the maximum rate for these villages.
54	Tawsee .....	1,295	672	1,399	923	101	251	8	37	
55	Sunsur .....	4,716	1,519	5,285	2,341	569	792	12	51	
56	Kajhur .....	4,715	1,538	5,600	1,855	861	317	18	21	
57	Neemboree .....	1,501	417	1,834	653	330	236	22	56	
58	Lakree .....	2,102	593	2,589	770	487	117	23	30	Maximum rate Rs. 1. Do. do. Do. do. Do. do. Do. do. Do. do. Do. do. Do. do. Do. do. Do. do. Do. do. Do. do. Do. do. Do. do. Do. do.
59	Nergoodeli ....	6,678	1,753	7,893	2,715	1,215	962	18	55	
60	Shetplul Gareh ..	3,595	1,131	4,535	1,620	940	489	23	43	
61	Pimpleh .....	1,560	545	1,765	769	205	224	13	41	
62	Mudunwaree ....	3,858	1,131	1,282	2,221	421	790	11	55	
63	Akoleh .....	3,582	1,173	4,068	1,750	486	583	13	50	
64	Badulwaree .....	1,636	584	2,218	879	582	295	36	51	
65	Halgoolwaree ....	300	129	116	170	110	41	36	32	
66	Bheegwun .....	2,314	865	2,419	1,766	105	903	1	105	
67	Deeksal .....	1,625	810	1,731	1,480	109	640	7	76	
68	Koombhargaoon ..	1,471	600	1,991	1,079	517	479	55	80	
69	Daejeh .....	3,688	1,326	3,859	2,212	171	886	5	67	
70	Pulusdeo .....	6,385	2,578	7,117	4,001	1,032	1,423	16	55	
71	Poondhoree .....	2,221	718	2,630	1,128	409	410	18	57	
72	Tukrarwarce ....	517	233	583	481	36	248	7	107	
73	Loouee .....	3,249	1,261	3,405	1,805	156	544	5	43	
74	Kowtulee .....	2,143	463	2,720	712	577	249	27	54	
75	Neerwangee ....	5,614	2,620	5,981	3,897	340	1,275	6	49	
76	Khurochee .....	3,615	1,752	3,615	2,276	..	524	..	30	
		2,30,068	78,769	260,620	121,658	30,552	42,889	..	..	

Add villages which have come under Government management during the Settlement lease.

Number.	NAMES OF VILLAGES	Present Assessment according to Cultivation Returns for the year 1865-66		Proposed Assessment calculated on the Area under Cultivation in 1865-66.		Increase in Area and Assessment according to proposed Settlement.		Percentage Increase.	
		Acrea.	Rupees.	Acrea.	Rupees.	Area.	Assessment, Rupees	Area.	Assessment, Rupees.
	Navee .....	3,628	1,133	4,354	1,422	726	289	20	26
	Boree .....	3,648	1,282	3,886	1,426	238	144	7	11
		7,276	2,415	8,240	2,848	961	433	..	..
		237,344	81,184	268,860	1,24,506	31,516	43,322	..	..
	Assessment of uncultivated land..	791	207	1,216	194	425	13	..	..
	Total Area and Assessment of District .....	238,135	81,391	27,076	1,24,700	31,941	4,309	13	53
		Add Revenue from miscellaneous sources.							
		2,318							
	Rs. 83,709	being the full revenue collections of the year.							

J. FRANCIS, Lieut. Colonel,  
Survey and Settlement Commissioner.

12th February 1867.



# **CONTRASTED STATEMENT of the Number of Houses** **according to two Censuses taken respectively**

Number.	NAMES OF VILLAGES.		Houses.				Males.		
			Description.						
			Tiled.	Flat-roofed.	Thatched.	Total.	Below 15 years old.	Above 15 years old.	Total.
1.	2		3	4	5	6	7	8	9
1	Indapoor .....	1836-37..	7	449	440	896	1,088	1,992	3,080
		1865-66..	4	478	745	1,227	1,574	2,258	3,832
2	Shah .....	1836-37..	..	26	1	27	29	49	78
		1865-66..	..	5	20	25	56	89	145
3	Kandulgaon .....	1836-37..	..	73	33	106	108	263	311
		1865-66..	..	71	48	119	110	205	315
4	Turtgaon .....	1836-37..	..	10	4	14	4	31	35
		1865-66..	..	8	9	17	34	31	65
5	Heengangaon .....	1836-37..	..	42	17	59	66	92	158
		1865-66..	2	36	27	63	83	141	224
6	Baboolgaon .....	1836-37..	..	24	27	51	47	105	152
		1865-66..	1	20	35	55	69	159	228
7	Bhatningaon .....	1836-37..	..	39	5	44	52	75	127
		1865-66..	..	27	13	40	43	57	100
8	Bedsingh .....	1836-37..	..	7	4	11	10	16	29
		1865-66..	..	15	4	19	20	35	55
9	Owsuree .....	1836-37..	..	26	11	37	52	94	146
		1865-66..	..	20	16	36	61	108	169
10	Bhandgaon .....	1836-37..	..	61	51	112	114	181	295
		1865-66..	1	35	61	97	132	199	331
11	Bhagare .....	1836-37..	5	263	149	417	426	652	1,079
		1865-66..	182	214	245	639	769	1,045	1,814
12	Wajreh .....	1836-37..	..	10	..	10	9	17	26
		1865-66..	..	15	5	20	24	35	59

**Stocks, Cattle, &c. in Talanta Indagur of the Poona Collector.**  
**1886-87 and 1887-88.**

CATTLE.												
Horses.			Total Column 9 and 10.	Buffaloes and other Buffalo.		Cows and Calves.	She Buffaloes and their young ones.	Horses and Ponies, Mares and their young ones, Elephants and Camels.	Sheep and Goats, &c.	Total.	Cattle.	
Under 15 years old.	Matched.	Total.		Kept for agricultural purposes.	Kept for other purposes.							
10	11	12	13	14	15	16	17	18	19	20	21	22
652	2,123	2,775	5,855	1,683		2,380	678	205	2,507	7,456	6	185
969	2,252	3,221	7,051	1,853	38	2,324	636	167	2,735	7,753	147	108
16	51	67	145	73		131	6	2	529	744	2	8
43	109	145	290	161	4	154	41	3	399	762	3	12
76	223	299	610	259	..	195	84	15	529	1,282	5	22
60	227	287	602	306	8	309	64	17	714	1,418	5	20
2	28	32	72	53	..	51	16	..	31	151	..	6
21	43	64	129	64	..	71	18	..	55	208	..	11
38	98	134	293	123	..	167	43	2	270	607	1	3
69	143	212	436	191	5	234	36	11	1,079	1,556	7	13
33	104	137	289	153	..	208	29	2	93	485	..	14
60	150	210	488	260	..	251	47	14	112	684	10	21
22	74	96	223	115	..	208	22	10	262	617	..	18
26	64	90	190	80	..	131	15	6	320	552	6	8
9	18	27	56	19	..	37	7	1	21	85	2	2
12	26	38	83	42	..	42	10	1	220	315	1	6
55	90	145	291	160	..	215	26	8	18	427	3	7
37	115	152	321	157	6	121	37	5	391	717	6	19
83	190	273	568	203	..	247	84	12	397	943	7	14
82	212	294	640	225	3	233	71	14	683	1,229	12	23
109	287	396	873	219	..	1,673	377	101	1,468	4,838	33	101
105	282	387	811	204	31	1,427	374	114	1,714	5,674	38	114
6	17	23	49	18	..	34	2	1	102	157	..	10
17	27	44	93	30	2	36	..	..	36	124	..	17

# CONTRASTED STATEMENT of the

Number.	NAMES OF VILLAGES	HOUSES.				INHABITANTS.		
		Description.				Males.		
		Tiled	Flat-roofed	Thatched.	Total.	Below 15 years old.	Above 15 years old.	Total.
1	2	3	4	5	6	7	8	9
13	Gopee . . . . . 1836-37..	..	1	4	23	21	44	67
	1865-66..	..	28	3	31	39	43	82
14	Loomewaree, . . . . . 1836-37..	..	10	3	49	30	73	100
	1865-66..	2	43	8	53	78	93	171
15	Surater . . . . . 1836-37..	..	62	17	79	74	121	195
	1865-66..	5	49	30	84	123	145	268
16	Neernemgaon . . . . . 1836-37..	..	5	3	41	40	62	102
	1865-66..	..	50	13	69	83	100	183
17	Chakatee . . . . . 1836-37..	..	11	..	11	14	17	29
	1865-66..	..	17	8	25	45	46	91
18	Rednee . . . . . 1836-37..	2	68	11	84	87	148	233
	1865-66..	11	31	28	70	85	213	298
19	Redah . . . . . 1836-37..	..	81	8	92	91	149	240
	1865-66..	1	79	22	102	111	176	287
20	Setphul . . . . . 1836-37..	..	43	43	126	139	234	373
	1865-66..	2	76	56	134	140	229	369
21	Kathee . . . . . 1836-37..	..	103	18	121	120	218	338
	1865-66..	..	16	81	97	159	274	433
22	Peetkeshwur . . . . . 1836-37..	..	..	..	..	..	..	..
	1865-66..	..	13	..	13	16	19	35
23	Neemgaon Ketkee . . . . 1836-37..	..	210	85	295	365	503	868
	1865-66..	..	213	120	333	458	768	1,226
24	Gokhlee . . . . . 1836-37..	..	..	..	..	..	..	49
	1865-66..	..	32	6	38	41	52	93

Number of Houses, &c.—continued.

PARTS.				CATTLE.									
Females.			Total Columns 9 and 21.	Buffaloes and she Buffaloes.		Cows and Calves.	She Buffaloes and their young ones.	Horses and Ponies, Mares and their young ones, Elephants and Camels.	Sheep and Goats, &c.	Total.	Carts.	Ploughs.	
Below 15 years old.	Married.	Total.		Kept for agricultu- ral purposes.	Kept for other pur- poses.								
10	11	12	13	14	15	16	17	18	19	20	21	22	
	13	65	130	70	..	119	14	9	26	236	4	7	
32	54	86	168	68	3	60	19	6	65	248	1	7	
41	73	144	223	94	..	100	20	9	24	260	2	9	
58	83	141	312	136	..	128	31	11	96	402	11	8	
72	120	172	373	170	..	290	63	9	766	1,294	3	11	
73	160	233	501	237	3	173	67	11	382	873	3	15	
113	64	77	179	117	..	92	27	9	174	399	1	10	
51	109	160	343	131	8	119	56	14	248	576	..	13	
9	18	27	56	22	..	62	12	..	54	157	1	2	
13	50	63	154	70	..	68	28	6	36	208	3	6	
47	115	192	425	155	..	127	37	11	30	340	..	10	
75	181	256	554	237	1	196	58	21	329	845	9	35	
53	157	212	459	139	..	201	52	18	777	1,277	5	24	
66	183	249	536	242	12	183	50	16	325	828	5	26	
74	231	305	678	315	..	368	98	19	177	977	4	24	
99	242	341	710	294	1	287	62	42	282	968	11	22	
86	225	311	649	272	..	301	62	22	934	1,591	2	22	
103	230	333	766	249	20	194	53	13	648	1,177	4	59	
..	..	..	..	..	..	..	..	..	..	..	..	..	
20	14	34	69	28	..	26	4	1	21	80	..	4	
275	605	880	1,838	743	..	828	189	48	1,027	2,835	16	74	
392	788	1,170	2,496	802	27	558	229	71	1,242	2,929	64	86	
..	..	60	109	82	..	..	..	..	..	228	..	..	
18	50	68	161	303	3	258	30	8	1,173	1,775	5	35	

# CONTRASTED STATEMENT of the

Number.	NAMES OF VILLAGES.	HOUSES.				INHAB.		
		Description.				Males.		
		Tiled	Flat-roofed	Thatched.	Total.	Below 15 years of age.	Above 15 years of age.	Total.
1	2	3	4	5	6	7	8	9
25	Wungulee..... 1836 ..	.	.	.	2	3	0	3
	1865-66..	16	..	7	23	21	36	57
26	R. ree ..... 1836 37 ..	.	1.	.	12	6	16	22
	1865-66 ..	18	..	1	19	13	24	37
27	Gagurgaon ..... 1836 37 ..	.	10	.	10	7	16	23
	1865-66..	27	4	5	36	48	63	116
28	Beejowdee .... 1836 37..	.	0	.	20	17	39	56
	1865-66..	46	..	3	49	72	75	137
29	Balpooree' .... 1836 37 ..	.	1	.	1	4	2	6
	1865-66..	..	10	1	11	17	24	41
30	Bhowree ..... 1836 37..	.	29	1	30	22	14	36
	1865-66..	..	31	13	44	44	56	102
31	Chandgaon ..... 1836 37 ..	.	11	14	25	38	76	114
	1865-66..	1	19	25	45	28	107	135
32	Warkoteh (Bk).. .... 1836 37 ..	.	25	18	43	27	89	116
	1865-66 ..	3	85	32	120	133	186	319
33	Agotee ..... 1836 37 ..	1	50	63	113	128	218	346
	1865-66..	1	11	140	152	146	227	373
34	Gunjeewulun ..... 1836-37..	..	20	7	27	24	44	68
	1865-66..	..	17	2	19	27	32	59
35	Kuljee ..... 1836-37..	..	31	27	58	38	102	140
	1865-66..	2	58	56	116	127	186	313
36	Kaltun ..... 1836-37..	.	75	23	98	114	210	324
	1865-66..	..	82	58	140	126	189	315

## Number of Houses, &amp;c.—continued.

HAWKS.				CATTLE.								
Females.			Total Columns 9 and 12.	Buffaloes and she Buffaloes.		Cows and Calves.	She Buffaloes and their young ones.	Horses and Ponies, Mares and their young ones, Elephants and Camels.	Sheep and Goats, &c.	Total.	Carts	Trucks.
Below 15 years old.	Married.	Total.		Kept for agricul- tural purposes.	Kept for other pur- poses.							
10	11	12	13	14	15	16	17	18	19	20	21	22
12	34	46	103	44	..	45	17	4	275	385	1	4
1	26	27	64	34	..	27	15	2	326	404	..	3
28	59	87	203	74	5	79	11	3	509	681	3	8
38	79	117	254	108	3	134	31	7	515	798	2	8
12	25	37	78	45	..	52	6	2	480	585	1	4
33	66	99	201	78	5	76	9	1	314	483	2	6
34	73	107	242	105	2	80	6	12	159	364	..	13
74	191	265	584	277	4	265	38	9	784	1,377	4	22
101	237	338	711	325	..	307	73	15	440	1,160	..	15
10	32	42	101	38	..	48	13	3	24	126	..	4
78	156	234	506	242	5	246	26	9	351	879	2	36
128	227	355	720	271	1	270	103	18	845	1,508	4	32

# CONTRASTED STATEMENT

Number.	NAMES OF VILLAGES.	Houses.				Males.		
		Description.				Males.		
		Tiled.	Flat-roofed.	Thatched.	Total.	Below 15 years old.	Above 15 years old.	Total.
1	2	3	4	5	6	7	8	9
37	Seersoree .....	..	36	35	71	95	71	166
38	Parusthul .....	..	51	11	62	65	127	192
39	Ajotee .....	..	27	44	71	56	107	153
40	Soogaon .....	..	31	43	74	76	122	198
41	Pimpree (Khoord) ....	..	11	7	18	80	33	63
42	Kullus .....	2	245	158	405	438	623	1,061
43	Rooce .....	..	61	62	123	147	227	374
44	Vehales .....	..	63	9	72	80	151	240
45	Gotpondee .....	6	89	22	116	100	172	272
46	Shelgaon .....	1	249	153	403	448	610	1,078
47	Hateornek .....	1	71	51	123	245	366	471
48	Lateornek .....	36	187	191	354	335	621	956

## Number of Horses, &amp;c.—continued.

CATTLE												
Females.				Buffaloes and she Buffaloes.							Carts.	Florida.
Below 15 years.	Married.	Total.	Total Cattle 9 and 12.	Kept for agricul- ral purposes.	Kept for other pur- poses.	Cows and Calves.	She Buffaloes and their young ones.	Horses and Ponies, Mares and their young ones, Elephants and Camels.	Sheep and Goats, &c.	Total.		
10	11	12	13	14	15	16	17	18	19	20	21	22
35	78	113	114	121					51	217		11
33	100	133	299	130	..	155	47	9	498	839	1	14
50	106	159	294	1				11	70	789	1	10
69	152	221	413	187	2	206	44	18	914	1,371	2	14
37	61	113	293							743	2	11
56	106	162	325	157	9	115	42	13	142	478	6	17
10	113	133							41	1	4	20
47	124	171	369	141	7	146	39	5	536	874	..	19
4		11		1					..	27	1	3
19	34	53	116	60	..	50	10	2	149	271	3	10
147	413	639	1,077	604					1	10	10	59
241	620	861	1,922	821	6	889	85	28	3,667	5,496	31	67
50	111	211	413	211					1,735	1,735	3	22
89	236	319	693	256	2	283	62	11	1,160	1,774	7	32
44	136	180	370	131	..	111	50	19	13	494	4	16
68	159	227	467	193	..	169	46	10	304	722	8	15
59	156	209	436	233	..	193	30	15	515	1,005	3	19
76	147	223	495	182	3	166	24	8	534	917	11	22
217	492	709	1,519	702	..	721	203	60	1,735	3,451	11	40
285	652	947	2,025	900	24	789	140	45	2,920	4,818	39	65
72	204	276	602	317	..	328	27	22	1,196	1,890	4	25
155	372	427	898	263	9	235	27	28	1,655	2,217	16	20
208	486	583	1,412	609	..	668	181	60	770	2,283	12	22
294	607	801	1,757	506	35	486	134	22	829	2,011	55	32



## CONTRASTED STATEMENT

Number.	NAMES OF VILLAGES.	HOUSES.				INHAHANTS.		
		Description.				Males.		
		Tiled.	Flat-roofed.	Thatched.	Total.	About 15 years old.	Above 15 years old.	Total.
1	2	3	4	5	6	7	8	9
49	Kalamb .....		13	64	221	207	396	605
	1865-66..	6	95	112	213	219	353	572
50	Chetana .....		6	9	11	19	29	44
	1865-65..		2	13	15	18	48	66
51	Kurowlee .....		7	43	60	101	163	
	1865-66..	5	17	15	37	69	109	178
52	Jamb .....							46
	1865-66..	6	14	3	23	23	30	53
53	Oodhut .....				71	53	110	209
	1865-66..	16	46	9	71	97	160	257
54	Tawsee .....		22	63	103	106	161	267
	1865-66..	12	31	13	56	64	89	153
55	Sunsur .....				100	107	196	303
	1865-66..		58	99	157	187	271	458
56	Kajhur .....			11	114	115	199	314
	1865-66..		50	89	139	245	322	567
57	Neembore .....		21	7	28	42	52	94
	1865-66..	3	15	36	54	54	114	168
58	Lakree .....		30	30	60	67	89	155
	1865-66..	2	43	54	99	140	196	336
59	Nieroodah .....							287
	1865-66..	9	75	68	127	226	319	545
60	Chahal Gureh .....		87	40	117	121	194	315
	1865-66..	15	47	62	114	167	311	478

Number of Horses, &c. continued.

FAMILIES.				CATTLE.							Carts.	Ploughs.
Below 15 years old.	Married.	Total.	Total Columns 9 and 12.	Buffaloes and she Buffaloes								
Kept for agricul- tural purposes.	Kept for other pur- poses.	Cows and Calves.	She Buffaloes and their young ones.	Horses and Ponies, Mares and their young ones, Elephants and Camels.	Sheep and Goats, &c.	Total.						
10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
440	411	551	1,403	574	..	..	..	..	610	1,919	18	47
147	376	523	1,095	455	..	332	69	26	394	1,276	35	11
6	..	..	..	..	..	4	7	..	..	..	..	..
20	47	67	133	48	..	37	12	6	101	204	..	4
4	..	..	..	..	..	..	..	..	..	..	1	15
62	110	172	350	121	1	96	33	16	101	368	16	15
12	..	..	..	..	..	..	..	..	..	137	2	4
19	28	47	100	50	..	45	10	..	10	115	6	4
59	61	..	..	..	..	1	..	17	9	403	5	12
47	181	178	435	166	..	133	42	13	504	858	19	13
4	91	101	280	94	..	11	..	..	..	329	2	9
54	92	146	299	105	..	111	19	3	143	381	..	8
79	194	273	566	221	..	203	..	..	111	697	6	28
86	267	353	811	211	..	255	31	22	375	894	28	25
81	224	505	619	216	..	265	71	1	553	1,197	4	36
131	350	481	1,048	345	1	353	35	32	534	1,300	8	47
29	57	86	160	96	..	171	26	6	25	331	8	18
36	114	150	318	98	..	119	8	1	155	381	13	14
88	28	126	181	131	..	241	29	11	399	814	..	22
173	433	606	1,032	170	4	247	20	13	291	745	11	7
..	..	245	332	276	..	..	..	..	..	1,761	11	..
115	317	402	937	479	..	473	34	31	1,386	2,403	32	31
89	196	284	499	345	..	425	75	22	1,032	1,899	18	30
100	269	369	897	461	31	354	73	31	1,107	2,057	61	68

## CONTRASTED STATEMENT

Number.	NAMES OF VILLAGES.	HOUSES.				INHABITANTS.		
		Description.				Number.		
		Tiled.	Flat-roofed.	Thatched.	Total.	Below 15 years old.	Above 15 years old.	Total.
1	2	3	4	5	6	7	8	10
61	Pimpleh .....	1836-37..	9	12	21	53	89	
	1865-66..	..	14	28	42	44	73	117
62	Mudunwaree .....	1836-37..	2	25	39	66	86	150
	1865-66..	2	25	39	66	86	150	236
63	Akoleh .....	1836-37..	38	63	91	223	130	353
	1865-66..	3	38	63	91	223	130	353
64	Badulwaree .....	1836-37..	1	33	31	72	87	159
	1865-66..	..	33	31	64	72	87	159
65	Halgoolwaree .....	1836-37..	11	6	17	17	27	
	1865-66..	..	6	..	6	11	9	20
66	Bheegwun .....	1836-37..	12	82	94	107	157	
	1865-66..	3	84	99	186	167	306	473
67	Deeksal .....	1836-37..	9	22	31	77	109	
	1865-66..	1	17	22	40	25	91	116
68	Koombhargaoon .....	1836-37..	49	20	69	109	171	
	1865-66..	1	59	26	85	98	182	267
69	Dasejh .....	1836-37..	29	70	99	121	223	344
	1865-66..	2	15	64	81	103	183	286
70	Pulusdeo .....	1836-37..	..	..	..	..	1,120	
	1865-66..	20	71	311	402	428	942	1,421
71	Bandhoree .....	1836-37..	61	13	74	73	122	195
	1865-66..	..	40	15	55	57	114	169
72	Fukrarwaree .....	1836-37..	..	..	..	..	..	..
	1865-66..	14	12	3	29	19	40	69

Number of Horses, &c.—continued.

TAMU.				CATTLE.								Carts.	Ploughs.
Female.			Total Columns 9 and 12.	Buffaloes and shee Buffaloes.		Cows and Calves.	Shee Buffaloes and their young ones	Horses and Ponies, Mares and their young ones, Elephants and Camels.	Sheep and Goats, &c.	Total.			
Below 15 years old.	Married.	Total.		Kept for agricul- tural purposes.	Kept for other pur- poses.								
10	11	12	13	14	15	16	17	18	19	20	21	22	
19	39	1	1	1	..	..	19	13	14	561	..	10	
41	66	107	224	93	..	98	5	7	364	567	..	..	
12	..	..	..	..	..	..	..	..	..	51	..	15	
40	121	161	397	183	5	133	14	20	764	1,119	10	19	
41	2	1	1	1	..	..	..	2	1	812	2	15	
221	98	319	674	330	1	366	56	16	654	1,423	43	44	
..	..	..	1	..	..	..	..	..	..	123	..	6	
39	85	124	283	125	..	119	27	12	687	970	6	8	
7	..	..	..	..	..	..	..	..	5	13	..	..	
3	9	12	32	9	2	9	..	..	2	22	2	1	
13	121	17	31	..	..	1	3	1	2	1,023	2	30	
99	283	384	857	242	29	210	26	47	722	1,276	58	34	
19	79	99	307	..	..	1	13	8	21	476	..	10	
20	78	98	214	90	2	85	1	4	..	182	16	15	
48	109	157	313	176	..	220	22	1	1027	1,455	1	11	
59	127	186	423	153	7	148	11	7	514	840	24	9	
88	200	283	632	253	..	353	107	21	913	1,615	1	23	
63	158	221	509	261	..	313	52	24	433	1,083	26	43	
..	..	1,097	2,217	753	..	..	..	..	..	3,047	52	..	
313	753	1,072	2,483	776	39	759	172	68	2,469	4,283	79	50	
73	113	155	363	199	..	313	21	23	1,127	1,683	..	10	
43	101	144	295	142	7	174	16	9	1,074	1,422	3	8	
..	..	21	42	26	..	..	..	..	..	37	1	0	
24	38	62	122	60	..	56	18	1	15	150	3	4	

# CONTRASTED STATEMENT of the

Number.	NAMES OF VILLAGES.	HOUSES.				Males.		
		Description.				Males.		
		Tiled.	Flat-roofed.	Thatched.	Total.	Below 15 years old.	Above 15 years old.	Total.
1	2	3	4	5	6	7	8	9
73	Loonee..... 1836-37..	..	16	37	53	85	182	267
	1865-66..	..	52	80	132	177	235	412
74	Kowtulee..... 1836-37..	..	21	3	24	48	61	109
	1865-66..	..	..	58	58	69	111	180
75	Neerwahigee..... 1836-37..	..	67	6	73	247	441	673
	1865-66..	10	149	219	378	278	495	773
76	Khurochee ..... 1836-37..	17	83	23	103	123	3	370
	1865-66..	56	69	56	181	191	278	469
77	Navee ..... 1836-37..	3	103	35	141	127	11	211
	1865-66..	5	56	43	104	120	141	261
78	Boree ..... 1836-37..	..	113	13	126	132	2	134
	1865-66..	1	82	81	164	215	291	506
	1836-37..	51	4,177	2,207	6,735	7,000	12,590	21,129
	1865-66..	560	4,351	4,375	9,286	11,244	17,152	28,495

*Number of Houses, &c.—continued.*

TANTS.				CATTLE.								Carts.	Mileage.
Females.			Total Columns 9 and 12.	Buffaloes and shee Buffaloes.		Cows and Calves.	Shee Buffaloes and their young ones.	Horses and Ponies, Mares and their young ones, Elephants and Camels.	Sheep and Goats, &c.	Total.			
Below 15 years old.	Married.	Total.		Kept for agricul- tural purposes.	Kept for other pur- poses.								
10	11	12	13	14	15	16	17	18	19	20	21	22	
81	183	261	528	268	..	405	63	18	61	618	1	28	
125	248	373	785	331	14	349	47	26	365	1,132	12	24	
21	53	77	186	124	..	173	27	10	229	563	3	12	
51	107	158	338	185	2	241	49	15	335	827	3	26	
172	412	584	1,262	676	..	869	181	51	1,147	2,924	11	58	
222	531	753	1,526	256	145	422	119	31	563	1,836	40	72	
92	242	334	704	319	..	517	141	20	908	1,933	6	33	
126	332	458	927	432	..	334	118	37	539	1,480	37	35	
89	196	285	597	281	..	326	53	51	1,213	1,907	3	21	
70	173	243	504	350	4	218	38	11	507	1,128	9	..	
142	246	388	743	230	..	173	34	27	207	671	2	..	
132	315	447	953	333	..	174	51	14	545	1,117	7	..	
4,913	12,714	19,050	40,179	17,673	..	21,343	4,477	1,431	36,257	85,087	291	1,454	
7,365	16,976	24,336	52,830	20,976	591	19,684	4,290	1,402	47,305	94,248	1,165	1,820	

J. FRANCIS, Lieut. Colonel,  
Survey and Settlement Commissioner,

## Appendix I.

To S. MANSFIELD, Esq.,

Assistant Collector, in charge of Indapoor.

SIR,—In doing myself the honour of reporting on the Revision of the Survey and Assessment of the Indapoor Pergunna, I feel little hesitation in expressing the favourable opinions of it contained in the following pages, since the praise and credit due to its projectors, and the contrivers of its system, fall to others. The plan for its execution had been laid down before I received charge of my present duties; the elements also of the settlement ~~had been~~ determined, and, in a portion of the pergunna, had been combined into the finished assessment.

2. Of the plans adopted for revising and correcting the survey measurements, re-classifying the lands, ensuring accuracy in returns and reports, checking the work performed by subordinate agents, and conducting all other details of business, Messrs. Goldsmid and Wingate had already given ample memoranda to the Principal Collector. These, coming, as they do, from the officer who contrived the arrangements, must be much more satisfactory than any description of them I could give. I shall therefore altogether omit this part of the subject in my present report, and shall principally confine my observations to the principles on which the revision of assessment has been conducted, its results as connected with Mr. Pringle's and the Mamool settlements of the district, and its effects on the condition of the people and the revenue of Government.

3. In following out the system of revising and correcting the survey measurements, described in the memoranda above alluded to, it was found necessary to re-measure the whole lands ~~of~~ out of the 86 villages in the pergunna. The soil of nine out of these 17 villages is so continuously good, and consequently the

boundaries of the various fields so fixed and well defined, that the errors discovered there can only be attributed to mismeasurement on the part of the carkoons employed by Mr. Pringle.\* That these mismeasurements were wilful there can be little doubt, since Government were in all these cases losers by them; and this idea is confirmed by the discovery that several of these villages were entrusted for measurement to the same carkoon. In the other 8 villages the line of demarcation, in many fields, between the arable and unarable land is dependent on the fancy of the cultivator, and in consequence it is so variable as to render it impossible that measurements made at any great intervals of time should correspond; but even in these villages I am inclined to think the mismeasurements in many instances wilful. In the remaining 59 villages of the pergunna the survey measurements seem to have been executed with very tolerable accuracy and fidelity. This circumstance is, I believe, to be attributed to the inexperience, in the act of exacting bribes, of the carkoons who measured it. With one or two exceptions none of them had ever been previously employed in any other pergunna.

4. It was determined by Government that the acre should

† Government letter No. 2056 of 1835, paras. 14 and 15.

‡ Government letter No. 2056 of 1835, paras. 16 and 17.

§ Revenue Commissioner's letter No. 1162 of 1835, para. 11, and No. 898 of 1835, para. 15.

continue the standard land measure of the pergunna;† that Mr. Pringle's measurements should be retained; and that the determination of the rates of assessment should be left to Mr. Goldsmid.‡

It appears, however, that, in conformity with Mr. Goldsmid's first views of the subject, it was imagined that only three or four rates would be established. §

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\* In most fields an error of even 10 per cent. in the measurement affects the assessment no more than a difference of half an anna in the rate per acre. For instance, take a field of 40 acres, and let the rate be 5 annas. The proper assessment on it is 5 times 40, or 200 annas. Let it be mismeasured as containing 44 acres, and at the same rate, the assessment will be  $44 \times 5 = 220$  annas; let it be misassessed at  $5\frac{1}{2}$  annas, and the assessment will be  $5\frac{1}{2} \times 40 = 220$  annas. Both these results differ from the proper assessment by 20 annas. Accuracy within half an anna in the classification can never be expected, and therefore, though perfect accuracy would be desirable, measurements within 10 per cent. of the truth are not to be considered as out of keeping with, or as vitiating the rest of the work.



5. These rates were considered necessary by the native governments, and also by those of our

\* Revenue Commissioner's letter No. 502 of 1835, para. 37; Mr. Shortrede's letter, dated 15th January 1835, para. 13.

own countrymen best fitted for judging on the subject, \* to form an assessment possessing the proper degree of minuteness of valuation on the basis of the

Chahoor, a measure which has been described by Government as being, roughly speaking, equal to 120 beegas, but as deviating on both sides of this limit according to the quality of the lands. It will not therefore appear surprising that, on the substitution of the invariable acre for this pliable and accommodating measure, a close examination into the nature of the soils in the pergunna and their comparative productive powers showed that minuteness of valuation could now only be obtained by the introduction of a greater number of rates.

6. Probably similar considerations induced the originators of the first survey to adopt nine rates instead of following the native custom of using only three. But however this may be, it was now found that, for the purpose of assessment, the division of the soils into three colours, each colour containing three sorts would be sufficiently minute, and that it would possess the advantage of not being altogether unknown to the carkoons to be employed in the work of classification and the people whose lands were to be assessed.

7. One of the most difficult operations in making an assessment is to determine with accuracy the proportion by which the levy from different sorts of lands should be regulated; and a false system here seems to have been one of the chief defects of the first survey. It is observed by the Revenue Commissioner "that the great objection urged by the people to the survey rates is the increase which they have imposed on the inferior lands, while on the superior lands they have effected a reduction."† This general and universal hardship cannot be accounted for, even by the numerous causes of error and defect exposed by Lieutenant

† Revenue Commissioner's letter No. 502 of 1835, para. 37.

Shortrede ; it is so general and universal that we must look for its cause in the system, and not in the execution, of the survey.

8. The survey rates were fixed at 55 per cent. of the net profit on land ; and of this system the disproportion above alluded to appears to have been the natural effect. Assessing fields at a percentage of the net profit was, in fact remunerating the cultivator, not in proportion to his labour, but in proportion to the value of the field on which he laboured. To show how unequally, by this system, people requiring the same funds for their support were remunerated, I have calculated, from the survey papers of 13 villages in the Indapoor Pergunna, the sums which, had the survey been conducted, in other respects, on right principles, would have been left with the respective holders of fields of the nine kinds of soils, so differing in size as to require each an annual expense of 5 rupees for their proper cultivation. They are as follows :—

1st Black	2nd Black.	3rd Black	1st Rcd.	2nd Rod	3rd Rcd	1st Burrud	2nd Burrud	3rd Burrud
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
2 11 11	2 8 7	1 3 5	1 9 5	1 4 8	0 15 4	0 15 10	0 10 3	0 6 10

The fair sum to have left with each of the owners of these fields, as calculated from the same papers, would have been somewhat more than one rupee.

9. In fixing the rates in the Indapoor Pergunna care was taken to avoid this error. Lieutenant Shortrede has well explained in the 72nd, 73rd, 74th, 75th, and 76th paragraphs of his report on the revenue survey, dated the 24th October 1835, the liabilities to error which must invalidate the results presented by the long and tedious method of estimating in numbers the expense and profits of cultivation ; and in his 109th and 110th paragraphs he proposed two other methods of graduating an assessment—one “founded on a portion of the gross produce, decreasing from the rich to the poor soils ;” the other by determining on the spot, by means of persons possessing “some experience and tolerable judgment,” assisted by the cultivators, what rate per acre the “soil of each

particular field will bear." The expression, "assessing each at what it will bear," corresponds, I imagine, to the one made use of by the Honourable Court of Directors when they direct land to be assessed according to its capabilities; and performing this operation on the spot, by the experience and judgment one possesses, is the plan acted upon by the landlord and tenant wherever such a relation exists. But to have visited personally each field in a pergunna containing 220,000 acres would have been the work of at least twelve years, and a plan for shortening this period became absolutely necessary.

10. By visiting fields of each of the nine kinds of soil, and determining, with the assistance of those best skilled in agriculture, and by the judgment and knowledge they themselves possessed, what assessment, after taking into consideration the uncertainty of rain and all other circumstances, an acre of each sort of soil could bear, and applying rates thus fixed to returns, prepared and checked with the greatest care, of the quantity of soil of each sort existing in each field, Messrs. Goldsmid and Wingate succeeded in preserving in the assessment the true principle of assessing each field at what it will bear (for its capability), whilst they adopted a plan compatible with speediness of execution.

11. The result of their examination was the accompanying table of rates,\* for the fairness and justness of which Government

\* Table No. 5. must principally rely on the known judgment, experience, and knowledge of the individuals who formed it. It will not be deemed irrelevant to the subject, however, if an attempt be made to show by facts that the new assessment of Indapoor, calculated on them, cannot well be objected to either as too high or too low,

12. The Tunka assessment on the villages in the pergunna, at present in the hands of Government, exclusive of the sums levied by Hucdars, amounted in round numbers to about 1,02,000 Rupees. To this sum adding 20,000 Rupees, as the probable amount of hucs levied directly by Hucdars, makes under that system the total burden of taxation on the people 1,22,000 Rupees.\*

\* 1,22,000 Rupees.

The Kumal assessment on the same villages amounted in round numbers to about 2,28,000 Rupees.\* The survey assessment, allowing 1,400 Rupees as what would probably have been the assessment on the village of Pondowree, lately fallen in to Government, amounted in round numbers, on the same villages, to about 2,03,000 Rupees.† The assessment as now revised amounts to about 84,000 Rupees.‡

13. The supersession of the Tunka by the Kumal assessment is to be attributed, as mentioned in the 9th paragraph of the Revenue Commissioner's letter No. 503 of 1835, to the augmentation of the resources of the country and the depreciation of the value of money since the days of Mullick Amber. The artificially increased population of the roving Maratha nation in its glory, and the gold and silver plunder gathered from one-half or India in the Peishwa's camp, sufficiently account for both these occurrences.

14. The necessity for superseding both the Tunka and Kumal by a lighter assessment than either may on the other hand be found in the lessened demand for produce, attendant on the dispersion of the Maratha orders of cavalry, and the increased value of money, caused by the ebb from Maharashtra of the wealth and riches which the tide of fortunate plunder had brought in.

15. It is to be regretted that the assessment by Mr. Pringle's survey was founded on the average price of grain during many previous years. The effects of temporary causes were just dying away, and it was the more probable that the price of corn would decrease still further, than that it would be raised to its former height. His assessment of this district was too high. It was even higher than the Tunka, which had been reverted to under Bajeeerow in 1807.

16. Under a native government, and subject to the extortions of unprincipled and unchecked government servants, it is difficult to say how much the people pay; but whatever may have been exacted by individuals from the people, I do not think that the Kumal assessment has ever been realized by any government

in this district ; and this opinion seems to be coincided in by the Revenue Commissioner in his letter No. 502 of 1835.\* Taking

\* Paragraphs 4 and 5 however, even the Kumal as a standard of comparison, it will be found that the corn assessment now and then do not very materially differ. The Kumal assessment of 2,28,000 Rupees was a commutation for 5,472,000 seers of grain, at the rate of 24 seers per rupee ; and this rate is not a high one for that time, as table Nos. I. and IV, will prove, in which it may be seen that the average price of grain in 1218, 19, 20, 21, 22 Fuslee, under the light Tunka assessment, was one rupee for 24½ seers. The present assessment of 84,000 Rupees is a commutation for 544,000 seers of the same grain, at the rate of one rupee for 66 seers, which has been the price of grain here for the last two years ; or, 4,452,000 seers at the rate of the average price of corn here for the last five years, viz. 55 seers for one rupee.

17. In discussing a question of this nature, in which the permanent improvement of the country and the welfare of the people are the great objects to be kept in view, it would seem short-sighted and unfeeling to propose the immediate improvement or otherwise of the Government revenue as a test by which to try a new assessment. The ultimate improvement of the revenue by every fair and liberal measure is an effect which time, we may feel assured, will always show. But in the present instance it is pleasing to point out that Government is an immediate gainer by a liberal measure. Without including sums collected as outstanding balances, the average annual collections in the pergunna from Fuslee 1235 to Fuslee 1245, excluding Fuslee 1242 as a

† *Vide* table No. IV. year of some scarcity, were 32,802 Rupees ; † the largest sum collected in

any one year of the 14 preceding Fuslee 1246, excluding sums levied for balances, was 48,020 Rupees.† In the past year (1246)—the

† *Vide* table No. III. first year after the commencement of the revision of assessment—the collections amounted to 50,198 Rupees ; † and they will probably exceed the sum in the present year (1247).

18. It will not be thought, I hope, after the foregoing paragraphs that the present assessment is too light.

19. From that part of my 16th paragraph which regards the relation between the present and Kumal assessments considered as commutations for grain, and my previous declaration that the Kumal assessment was never realized in this district, it would not at first sight be an unfair deduction that the present assessment is too heavy ; but it must be remembered that the people are now free from the extortions, cesses, and jastee-puttees of the host of Deshmooks, Deshpandehs, Patells, and Coolcurnees, who in former days took from them in general the means of paying the Government revenue.

20. Humiliating as it is, it is still a fact, that the Indapoor Pergunna has never till the present year been in so flourishing a condition as it was in Fuslee 1228, the first season after ~~it~~ received it from the Peishwa's government. In that season

215,911 beega were under cultivation,\* a quantity bearing the same proportion to the total number of acres. In the present season upwards of 189,000 acres of land are under cultivation.†

\* Vide table No II.

† Vide remarks in table No II.

21. In Fuslee 1245 the remissions in the sub and principal divisions of the Indapoor Pergunna were 4,667 Rupees in the former and 7,911 Rupees in the latter ; the outstanding balances for the same year were 160 Rupees in the one and 1,166 Rupees in the other. In Fuslee 1246 the new assessment was introduced in the subdivision. In that year, though the amount of remissions in the principal division rather increased, being 4,689 Rupees, the remissions in the subdivision fell in their amount to 1,266 Rupees ; the outstanding balances in the principal division also increased to 196 Rupees, while in the subdivision they fell, as compared with the previous years, from 1,166 to 205 Rupees.

The total amount of remissions and outstanding balances for Fuslee 1246 was 6,557 Rupees ; during the 14 previous years they never were so small.‡

‡ Vide table No. III.

22. That a partial introduction of the new assessment should so much diminish the amount of remissions and balances, and that the revision of assessment should increase cultivation to an extent unparalleled during the 20 years we have possessed the country, are strong proofs that the new assessment is not too high. The cheerful and contented looks of the peasantry, and the marked improvements in their dress, bear witness to the same point.

23. In conformity with the directions of Government on the subject, all lands irrigated from wells have been subjected to a Bagayet tax.

24. It was found impossible to estimate the comparative value of Mothiesthul Bagayet lands, among themselves, without referring to the quantity and permanency of water in the wells as the most important circumstances to be considered. Of these and other circumstances connected with each well, tabular documents were carefully prepared, and of the relative value of gardens having certain supplies of water containing certain descriptions of soil, &c., ideas were obtained in a manner similar to that described in my 9th and 10th paragraphs.

25. This being done, the idea naturally suggested itself, to divide the gardens into classes, and fix a certain rate of assessment for each class. But in practice it was found that to determine to which class a well should belong, when this determination rested on seven or eight different circumstances, such as the supply and the permanency of water, the depth and state of the well, the extent of the ground capable of being irrigated, and the extent actually watered at the time of inspection, was a most difficult and complex operation, requiring a greater exertion of judgment and thought than to fix the assessment separately on each individual garden; the latter plan was therefore adopted. This was done, in practice, by fixing for each well a nominal number of acres, all to be assessed at a fixed rent of 2 rupees each. This plan was adopted as facilitating an operation in which extent of acres was one of the grounds of consideration; but it is evident that it amounts to the same thing, whether the assessment be fixed at

fixed in money or be fixed in acres each of the value of 2 rupees. The latter is only an algebraic way of performing the former operation.

26. The highest assessment, including the Jerayet rate on the land watered by one *mhot*, has been fixed at 10 rupees. The Jerayet and Bagayet rates have been made distinct, the Bagayet being extra to the Jerayet. The Bagayet assessment has been fixed on the garden, and not on the acre; and the determination of the different shares to be paid by the different partners in a garden has been left to those persons themselves.

27. It is hoped that by this system all interference on the part of our native officers will be rendered unnecessary. So many changes are constantly taking place amongst the holders of Bagayet lands that the opportunity of interference on the part of Government servants would open a wide field of extortion to those who might have the inclination to practise it.

28. The pergunna of Indapoor contains 220,000 acres of land. Its re-assessment has cost Government 8,700 Rupees for cartoons, stationery, &c., and 7,500 Rupees \* for European superintendence. The latter sum would have been considerably less had there been no restriction as to the period in which the former could be obtained.

\* Officer's staff pay Rs 275 per mensem.

29. It will be unfair to quote Indapoor as an example of the time required for re-assessing a certain number of acres. Want of funds and inexperience combined to delay the work here, so that two years and three months have been spent in the operation.

30. The duties necessarily imposed on the natives of the establishment have been most arduous; not one of their number has escaped without an attack of fever or guineaworm, most have suffered from both. They have displayed more honesty, perseverance, and ability in their work than I expected to meet with.

31. Before concluding this report I hope I shall be excused for offering a few observations not so directly connected with it as the foregoing paragraphs. I have employed fifteen months,



with attention and interest, in my duties in this department, and am unwilling to quit the subject without glancing at its future prospects.

32. In this country agriculture is in a simple and unimproved condition, and the seasons are uncertain. The price of grain is consequently always fluctuating, and with it the value of the crops and the money rent of land; to these causes may be attributed the existence of annual settlements, and the custom, with native small proprietors, of letting out land for a share of the produce. While such remains the case it may always happen that a money assessment, which is one year paid with ease, will, if exacted from the people in the next, take from them a part of their fair portion of the produce of the earth. Hence a necessity for continued and vigilant superintendence on the part of the officer in charge of the district.

33. A glance at the annexed table of prices of corn\* will at once convey an idea of the effects political

\* Table No I.

causes have produced during the last thirty years on the value of corn, and therefore on that of land. It cannot be predicted with certainty whether things may not change, as made by Fuslee 1257, as they have since Fuslee 1237, or as they did between Fuslee 1218 and Fuslee 1228. It is urged that political causes are not now at work as they were then; it may be replied that moral ones are. On the expiration of the ten years' leases, now about to be granted, an inquiry should then, I think, be made as to the fairness the assessment may then display.

34. Many circumstances combine to prevent amongst the natives the existence of a richer class—the class whose wealth and leisure should enable them to obtain and diffuse knowledge, and cultivate learning amongst them. As permanent causes of this want I may point out the habit of marrying every child early in life, and the law for dividing the property of a parent among the children. The former custom multiplies the claimants of the benefits of the father, and prevents accumulation of property by lapses, &c.; the latter renders it impossible that a family not possessing some means of repairing its fortunes can long remain wealthy. In large

commercial cities such as Bombay, where fortunes are amassed with ease and rapidity, these customs do not appear to injure the condition of society. If one family sinks in importance and wealth, another rises in its place. But in the provinces, where there is no regenerating principle at work to raise up wealthy men, their effect is to divide and subdivide all property, as to leave with each individual but a bare sufficiency for support, to make and keep all poor, and then to prevent improvement and perpetuate ignorance.

35. Government will derive great advantages from the spur to cultivation which a fair and equitable assessment gives. Cheap corn, it may not be doubted, in a marrying country such as this is, will always find and preserve or create consumers; for the wants and miseries which carry off thousands will doubtless be mitigated by it. With population, imports and exports and manufactures must likewise increase. But Government, by becoming the bestower of still more valuable blessings on its subjects, may improve its own resources in a still greater degree.

36. Education will, by improving the condition of agriculture, as much tend to equalize and give stability to the value of land and produce as the construction of roads; and by education alone can the causes be removed which prevent the existence of a richer class in the districts. As this class increases, and education progresses, the wants, and consequently the employments, of the people will become more numerous, a greater demand for produce will be caused, and the price of produce will rise with the Government land rent, which, as a commutation for a share of that produce, may be raised also. In short, education appears to me to be as much the means of giving security and increase to the Government revenue, as it doubtlessly is of improving the moral and mental condition of its unenlightened and unfortunate, but yet teachable, subjects.

A. NASH, Lieutenant,  
Engineers

TABLE No. I.

**PRICES of GRAIN during the within-mentioned years in the District of Indapoor, Talooka Indapoor.**

Years, Fuslee.	Months.	Quantity of Grain sold for one Rupee in Pucka Seer		Years, Fuslee.	Months.	Quantity of Grain sold for one Rupee in Pucka Seer	
		Jowarree.	Bajree.			Jowarree.	Bajree.
1809				1824			
1218	February ....	24	29½	1233	April ....	36½	22
1810				1825			
1219	Ditto ....	24	20	1234	Ditto ....	12½	..
1811				1826			
1220	Ditto ....	22	18½	1235	February .	44	34
1812				1827			
1221	Ditto ....	25½	21½	1236	Ditto ..	64	..
1813				1828			
1222	Ditto ....	27	23	1237	Ditto ..	32	..
1814				1829			
1223	March ....	28	32	1238	April ....	80	68
1815				1830			
1224	February ....	33½	30½	1239	Ditto ..	46	..
1816				1831			
1225	Ditto ....	26	36	1240	May ....	40	38½
1817				1832			
1226	April ....	48½	40	1241	February .	60	35
1818				1833			
1227	February ....	24	16	1242	Ditto ..	23	36
1819				1834			
1228	Ditto ....	17	15½	1243	Ditto ..	46	34
1820				1835			
1229	Ditto ....	19½	12½	1244	Ditto ..	48	44
1821				1836			
1230	March ....	32	16	1245	Ditto ..	38	..
1822				1837			
1231	May ....	32	..	1246	Ditto ..	66	49
1823				1838			
1232	March ....	32	24	1247	Fuslee in the current year.		

This table is chiefly interesting as showing the gradual diminution in the price of corn from the days of the Peishwas to our own. By comparing the prices at the commencement with those at the end of the table, and then reading the list over, this circum-

stance will become very apparent. 'Fuslee 1242 is remembered by the people as a year of scarcity.' Corn, though doubly ~~valued~~ then as in the preceding and succeeding years, did not fetch the ordinary prices in 1218, 19, 20, 21 as inserted in the commencement of the table—a forcible example of the change in the relative value of money and produce which had occurred in the intervening 20 years. The extraordinary and sudden fluctuations in the price of corn are also remarkable in 1227; we find it twice as dear as in the preceding year 1226, and in 1228 it is nearly three times as dear as in 1226. In the year of famine (1234) we find it seven times dearer than in the plentiful year 1238, and in Fuslee 1242 the price of grain is three times higher than in the preceding year 1241.

The Indapoor measured seer is larger than the Poona; the latter is, I believe, more than double the size of that of ~~Bombay~~.

*N. B.*—But little bajree is generally grown in the pergunna. Jowaree is the principal food of the inhabitants; its price therefore has alone been considered in making use of this table.

**TABLE No. II.**  
**STATEMENT of CULTIVATION in the Indapoor**  
*Perguina from Fuslee 1228 to Fuslee 1246.*

Years.	Bce g	Acres.	Total of both.	REMARKS.
1819				
1228	215,911			
1820				
1229	210,532		210,532	
1821				
1230	203,446		203,446	
1822				
1231	210,968		210,968	
1823				
1232	177,197		177,197	
1824				
1233	173,896		173,896	
1825				
1234	148,562		148,562	
1826				
1815	126,544		126,544	
1827				
1236	200,905		200,905	
1828				
1237	159,273		159,273	
1829				
1238	157,754		157,754	
1830				
1239		126,050	126,050	
1831				
1240		132,416	132,416	
1832				
1241		130,671	130,671	
1833				
1242		134,564	134,564	
1834				
1243		150,604	150,604	
1835				
1244		126,310	126,310	
1836		68,430	68,430	Principal Division.
1245		63,277	63,277	Subdivision.
		131,707	131,707	Total.
1837		76,375	76,375	Principal Division.
1246	2,115	83,524	86,644.	Subdivision.
		159,900	162,019	Total.

The increase of cultivation in 1247 was 27,069 acres, which, added to the 162,019 under cultivation in 1246, makes a total of 189,888 acres at present under the plough.

TABLE No. III.  
**STATEMENT of ASSESSMENT of the Indapoor Pergunna from Fuslee 1228 (1819)  
 to Fuslee 1246 (1837).**

Year Fuslee.	Bia Jamma.		Seer Jamma.		Total		Remissions		Hucdar's allow- ance		Revenue to be collected.		Revenue actually collected up to end of April.		Outstanding after end of April.	
	Rs.	a. p.	Rs.	a. p.	Rs.	a. p.	Rs.	a. p.	Rs.	a. p.	Rs.	a. p.	Rs.	a. p.	Rs.	a. p.
1228	1,30,781	14 6	1,533	0 0	1,32,314	14 6			22,178	1 6	1,10,136	13 6	98,888	5 9	11,248	7 3
1229	1,56,190	13 9	6,300	0 0	1,62,490	13 9			34,064	2 9	1,28,426	11 0	1,21,592	13 0	6,838	14 0
1230	1,38,988	2 0	6,664	10 0	1,45,652	12 0	20	0 0	21,910	1 6	1,23,742	0 6	1,19,471	0 6	4,261	0 6
1231	1,49,023	9 9	10,169	2 6	1,59,192	12 3	1,128	11 3	24,304	7 0	1,33,649	10 0	1,29,076	15 6	4,592	10 6
1232	1,34,150	9 9	8,463	1 9	1,42,613	2 6	6,655	4 3	27,180	5 3	1,08,717	9 0	36,965	2 9	71,752	6 3
1233	1,43,485	0 6	9,176	14 8	1,52,661	5 0	9,377	7 0	26,338	11 9	32,381	5 3	19,331	13 0	18,049	8 0
1234	1,23,321	3 0	9,435	14 9	1,32,757	1 9	9,412	1 6	29,559	12 0	9,076	4 3	6,394	11 0	2,771	9 3
1235	65,397	13 6	5,344	5 3	70,742	2 9	9,100	8 9	17,651	8 9	43,857	1 3	38,936	8 0	4,920	9 3
1236	77,854	13 3	6,096	1 9	83,950	15 0	13,509	4 3	19,889	10 9	51,554	0 9	46,750	5 3	6,823	11 6
1237	67,111	2 0	5,730	13 6	72,841	15 6	6,426	2 5	15,339	14 9	14,699	8 9	8,746	4 3	6,153	4 6
1238	73,357	9 3	5,536	2 0	78,893	11 3	231	15 6	17,647	3 0	61,014	8 9	43,361	14 0	16,462	10 9
1239	1,03,652	14 2	6,168	6 3	1,09,821	4 5			17,442	10 1	92,375	10 4	48,020	9 9	44,358	0 7
1240	61,805	15 10	6,434	7 9	69,244	7 7	6	12 0	17,910	1 8	51,327	9 11	11,901	12 7	43,206	14 9
1241	71,769	12 8	5,291	0 9	77,060	13 5	5,532	5 10	11,636	11 0	11,901	12 7	11,844	1 3	357	11 4
1242	74,034	12 10	5,499	3 11	79,533	4 9	5,523	3 9	9,145	13 10	10,853	3 2	9,856	10 11	996	9 8
1243	81,501	12 9	6,030	15 3	87,531	12 0	9	8 0	27,904	11 6	59	67	35,635	4 7	23,932	3 11
1244	69,600	13 4	6,040	4 3	75,641	1 7	6,400	1 8	22,684	2 7	46,606	13 4	41,652	5 11	4,954	7 6
P. D. 1245	38,227	8 8	5,362	10 4	43,590	3 0	4,607	1 2	14,353	15 10	24,589	2 0	24,428	12 5	160	5 7
S. D. 1245	34,916	5 1	2,740	9 8	37,657	2 9	7,911	6 10	7,529	14 11	22,215	13 0	21,048	15 0	1,166	14 0
Total	73,144	1 9	8,103	4 0	81,247	5 9	12,578	8 0	21,863	14 9	46,804	15 0	46,477	11 5	1,327	3 7
P. D. 1246	41,462	3 11	4,277	3 5	45,739	7 4	4,889	12 0	15,180	3 2	25,669	8 3	25,472	9 5	196	14 10
S. D. 1246	31,749	12 5	2,800	10 11	34,550	7 4	1,266	4 9	8,333	3 8	24,930	14 11	24,725	14 8	205	0 3
Total	73,212	0 4	7,077	14 4	80,289	14 8	6,156	0 9	23,513	5 11	50,600	7 2	50,198	8 1	401	15 1

This table is interesting as showing the relation between the price of corn, the extent of cultivation, and the collections, with an average price of 34 seers for one rupee. We find the average collections to be upwards of 67,000 Rupees with a lesser average price of 44 seers per rupee, and with grain selling on an average at 88 seers per rupee we find the collection sink to 2,000 Rupees. That this failure in the revenue would not have been so great had cultivation been preserved by promptly lessening the assessment as the price of corn altered, appears probable from the fact that 50,000 Rupees were collected on this being done in 1246, although grain was then selling at 60 seers for one rupee.

Year's Average Quantity of Jowar sold for One Rupee.	Average extent of Cultivation	Average Amount of Jummabundy.	Average sums paid to Huc- dars, &c.	Average Col- lections up to end of April.
Fuslee.		Rs.	Rs. a p	Rs. a. p
1218				
1219				
1220	24½ seers ....	....	....	....
1221				
1222				
1223				
1224				
1225	32 ditto ....	....	....	....
1226				
1227				
1228				
1229				
1230	28 ditto .. { 198,659 beegas, about 168,258 acres }			
1231		1,19,122	26,001 0 0	87,550 0 0
1232				
1233				
1234	A year of famine	....	....	....
1235				
1236				
1237				
1238	52 ditto ....	80,365	16,950 1 7	29,323 0 0
1239				
1240				
1241				
1242	A year of famine.	....	....	....
1243				
1244	44 ditto ....	81,477	24,154 0 0	40,921 0 0
1245				
1246	66 ditto ....	80,289	23,533 0 0	50,198 0 0
1247				
1248				
1249				
1250				
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1296				
1297				
1298				
1299				
1300				

Dhelee land, or land on which a sediment is left by the overflowing waters of the rivers, has been assessed somewhat more highly than any description of land mentioned in the table; but there is very little land of this description in the pergunna; and land merely wetted in the rains by the overflowing of rivers, called by the natives Mullae, has been also rather more highly assessed than it would have been by the accompanying rates. Of this description also there is very little land in the pergunna.

TABLE No. V.

*TABLE of RATES of ASSESSMENT per Acre on the within-mentioned kinds of Soil.*

	1st Black	2nd Black	3rd Black	1st Red	2nd Red	3rd Red	1st Burud	2nd Burud	3rd Burud
In Reas.....	300	240	170	200	130	75	100	60	35
In Annas.. ...	12	9 7	6 10	8	5 2	3	1	2 5	1 5

It was first intended to have entered in this table the various assessments of all the Government villages in the pergunna, of which there are 76. Doing so would, however, have much increased the bulk of a report which already exceeds the size to which I could wish to restrict it, and would not, I think, enable any person to form a better judgment of the merits of the present system than can be made from what has already been stated on the subject.



TABLE No. VI.

*COMPARATIVE STATEMENT of the Tunka, Kamal, Paimash, and Pruthbundy Assessments of a few of the principal Villages in the Indapoor Pergunna and of the Pergunna itself.*

VILLAGES, &c	Tunka Assessment	Kamal Assessment	Survey or Paimash Assessment.	The recent or, as called by the Natives, the Pruthbundy Assessment.	REMARKS
	Rs. a p	Rs. a p	Rs. a p	Rs. a p	
Cusba Indapoor ...	7,491 4 0	11,558 14 0	13,460 7 0	6,190 15 6	In the sums given as the Survey or Paimash Assessment of these villages, the caroon's is not included
<del>Ditto</del> Bowrah ...	7,615 11 0	16,934 9 0	15,149 3 2	7,055 9 6	
Ditto Kullus ....	3,496 10 0	8,443 6 0	6,880 4 2	2,787 12 11	
Maizeh Pulusdeo .	2,856 8 0	6,978 15 0	6,020 10 8	2,652 13 4	
Ditto Lasoornee ..	2,841 10 0	5,980 8 0	7,153 11 7	2,514 12 3	
The whole Pergunna	1,02,548 0 0	28,760 13 6	2,02,674 6 0	83,918 8 10	

As the settlement of the Bagayet in Cusba Indapoor is not quite completed, 200 Rupees has in this statement been taken as the approximate Bagayet assessment on the gardens there.

## Appendix No. II.

No. 139 of 1838.

To R. MILLS, Esq.,

Principal Collector, Poona.

SIR,—In transmitting the accompanying copies of correspondence from Lieutenant Nash upon the completion of the revision of assessment of the Indapoor district, I beg to apologise

for the length of time suffered to elapse before doing so, which has been partly occasioned by the little leisure left me during the fair season, and also by my wish to learn the results of the past year's settlement before closing the present report.

2. Lieutenant Nash designedly omits giving any details connected with the plans pursued for revising and correcting the survey measurements, classifying the lands, and superintending the native establishment, in consequence of memoranda upon these points having previously been furnished you by Mr. Goldsmid and myself, and confine himself to an investigation of the principles on which the revision has been conducted, its results as compared with Mr. Pringle's, and the Mamool settlements of the district, and its effects on the condition of the people and the revenues of Government.

3. Mr. Goldsmid was vested with most ample discretionary power\* regarding the conduct of the revision of assessment, and the plan he adopted for procuring the requisite data was to revise and correct the survey measurements, and to make an entirely new classification of the soil.

\* G. L. to R. C. No 2056 of 1835, dated 7th September.

4. The accuracy of the measurement was tested by having a certain number of the fields of every village (marked off from the papers, by the European officers) re-measured by the carkoons of the establishment, whose work was subsequently tested by the surveying officer, and accuracy ensured by the prompt infliction of punishment upon occasion of error or negligence on their part being brought to light. If the result of this investigation showed the survey measurements to have been executed with a tolerable degree of accuracy,† they were retained and corrected when necessary; but when it appeared that the errors were beyond reasonable limits and likely to vitiate the assessment, the village was wholly re-measured. The necessity of making an entirely new classification of the soil, without reference to that executed at the time of the survey, was owing to the latter being

\* Within 10 per cent. of the truth.

made after no general standard, the particular classes of soil in one village (as described in the 77th paragraph of Lieutenant Shortrede's report) not corresponding with those bearing the same denomination in another, which must have increased greatly the difficulty of forming an effective check, if it did not render this altogether impracticable.

5. In consequence of this defect in the survey classification Mr. Goldsmid determined to reject it altogether and re-classify the whole pergunna upon one general system, having reference solely to the natural productive qualities of the soil, and leaving wholly out of consideration extrinsic circumstances, such as vicinity to the village, command of water, &c. &c., which, although carefully noted, with the view of finally assisting in fixing the assessment, were not permitted to affect the classification. By this means ~~the elements~~ of the classification were reduced to a consideration of the natural fertility of the soil alone, which rendered the work comparatively simple, and enabled the European officer, after acquiring some practical knowledge of the different descriptions of soil usually met with, to become an effective check upon the carkoons engaged in classifying the land. Such is a brief sketch of the preliminary measures pursued in Indapoor with the view of obtaining data for the assessment, for more detailed information regarding which than could conveniently be embodied in the present letter I beg to refer you to my memorandum on the subject, dated 15th April 1837. I now resume the consideration of Mr. Nash's report.

6. In his 3rd paragraph he mentions that of 86 villages comprising the pergunna, 17 have required to be wholly re-measured. In nine of these 17 villages he attributes the errors of the survey measurements to design, while in the remaining eight he thinks the discrepancy between them and the present measurement of boundaries due to the fancy of the cultivator. However this may be, the fact of the survey measurements having been found so generally correct is extremely satisfactory, and my own experience would lead me to infer that they were in general executed with

much greater fidelity than is usually considered to have been the case.

7. After briefly noticing the different instructions issued by Government respecting the revision of assessment, Mr. Nash in the 5th and 6th paragraphs of his report proceeds to consider the reasons which induced Mr Goldsmid to adopt a greater number of rates than had originally been contemplated as necessary. "On the substitution of the invariable acre," he observes, "for this pliable and accommodating measure" (the Chahoor, which commonly varies in size according to the quality of the land), "a close examination into the nature of the soils in the pergunna and their comparative productive powers showed that minuteness of valuation could now only be obtained by the introduction of a greater number of rates." The objects indeed of accurate measurement and minute classification, which are to ascertain the relative values of different fields, would be lost sight of by any considerable limitation of rates, on which account it was determined that in Indapoor they should be limited only by the extreme of assessment fixed for the worst and best description of land, or range, according to the quality of the soil, from 2 annas up to 12 annas per acre of Jerayet land.

8. The 7th and 8th paragraphs of Mr. Nash's report will be perused with interest, as containing a clear and satisfactory exposition of the main causes of inferior land being relatively higher assessed at the survey than that of better quality. He shows this to have been the inevitable result of the principle adopted at the survey, of assessing the land at a percentage of the net produce. "This," he justly observes, "was in fact remunerating the cultivator, not according to his labour, but in proportion to the value of the field on which he laboured." From a calculation made from the survey papers of 15 villages he shows, in a tabular form, the amount of profit which, according to Mr. Pringle's assessment, would be received from cultivating a portion of the various classes of soils requiring each an annual outlay of 5 rupces. This, it will be seen from his table, diminishes gradually as the quality of

the soil becomes inferior, till at length it is nearly absorbed in the Government assessment, which then renders cultivation next to impossible. When the cultivation of 1st Black soil, as will appear from an inspection of Lieutenant Nash's table, receives a return of upwards of 50 per cent. upon his outlay, and that of 3rd Burrud only about  $8\frac{1}{2}$ , we need search no further for a satisfactory reason for the survey assessment pressing heavily upon inferior lands. If a coonbee, at an expense of 50 Rupees, can obtain from good land 100 Rupees' worth of produce, and from inferior land at the same expense can only obtain 80 Rupees' worth, the net produce in one case is worth 50 Rupees and in the other 30; and if a half of this were the proportion to be taken for the Government assessment, there would remain to the cultivator a profit of 25 Rupees in the one case and 15 Rupees in the other; but surely where the labour, the stock, and the outlay required are equal, so ought also to be the profit.

9. To afford a further illustration of the effect of these principles upon the survey assessment, I have compiled the following table from the papers of the village of Ooplay Boodrook in the Marha Talooka, in which the assessment was fixed at 55 per cent. of the net produce, as estimated by Mr. Pringle's assessors. Column No. 1 of the table gives the number of acres of each description of soil, which, according to their calculations, can be cultivated at an annual expense of 100 Rupees; column No. 2 the net produce per acre, and No. 3, 55 per cent. of this, or the rate of assessment; No. 4, the amount of assessment upon the number of acres entered in column No. 1, and No. 5 the balance of net produce, or profit, remaining to the cultivator. By inspecting the last mentioned column it will be found that from 1st Black to 3rd Burrud the profits of cultivation vary from Rs. 32-8-3 to Rs. 12-5-3, the expenses in every case being 100 Rupees. The total amount of assessment upon the number of acres entered in column No. 1 of the table is Rs. 236-7-3, and the three last columns are entered to show how, under the supposition of this remaining the same, the rates should, in my opinion, have been adjusted, to leave the profits of cultivation in all cases exactly equal.

**STATEMENT illustrative of the inequality of the Survey Rates in consequence of being a percentage of the Net Produce and showing how they might have been fixed so as to render the profit of cultivating every description of Land exactly equal.**

No.	NAMES OF SOIL.	No. of Acres capable of being cultivated at an annual expense of 100 Rupees.	SURVEY RATES, &c.			PROPOSED RATES, &c.			
			Value of Net Produce or Rates of Assessment per Acre.	55 per cent. of Net Produce, or Rate of Assessment per Acre.	Amount of Assessment on the number of Acres in Col. No. 1.	Balance of Net Produce, being the Profit of Cultivation.	Proposed Rates of Assessment per Acre.	Amount of Assessment on the number of Acres in Col. No. 1.	Balance of Net Produce, being the Profit of Cultivation.
No. 1.			No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.
Acres.	Goontas.	Annas.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	1st Black	36	2 8 0	1 6 0	39 11 9	32 8 3	1 12 1	50 11 1	21 8 11
2	2nd ditto	15	1 15 3	1 1 3	31 10 9	25 11 2	1 3 6	35 13 0	21 8 11
3	3rd ditto	33	1 7 9	0 13 0	28 4 9	23 6 4	0 13 10	30 2 2	21 8 11
4	1st Red	13	2 0 6	1 1 9	32 8 6	27 0 7	1 4 9	33 0 2	21 8 11
5	2nd ditto	1	1 5 3	0 11 9	25 11 6	20 12 9	0 11 5	24 15 4	21 8 11
6	3rd ditto	29	0 14 4	0 7 9	19 11 3	16 12 5	0 5 10	14 14 9	21 8 11
7	1st Gravelly	14	1 2 1	0 10 0	25 3 6	20 6 1	0 9 7	24 0 8	21 8 11
8	2nd ditto	34	0 13 2	0 7 3	18 8 2	15 1 7	0 4 9	12 0 10	21 8 11
9	3rd ditto	33	0 10 0	0 5 6	13 1 0	12 5 8	0 2 2	5 13 4	21 8 11
Total		..	....	....	236 7 2	194 0 5	....	236 7 4	194 0 3

10. There are, however, other sources of error in the survey assessment to which, with that already mentioned, must be attributed its failure more than to any defects of execution. The chief of these consist in it being founded on an average of the prices of grain, and the amount of collections during previous years, without a due consideration being given to the actual condition of the people, and to an investigation of the causes which during the years of the average had made these prices and collections stationary or fluctuating, advancing or declining. To adopt as a basis of assessment an average of past collections was to admit that the previous settlement was not heavy as a whole, but merely required being properly apportioned, which the yearly increasing poverty and wretchedness of the people, a declining cultivation, and a progressive fall in the price of grain, notwithstanding a diminished supply, all tended to disprove. The calculations too for fixing the survey assessment were made upon the supposition of the land being properly tilled, whereas there is perhaps not one field in ten in this collectorate that is so, or that commonly yields the quantity of produce estimated in the survey returns. These circumstances contributed to make the survey assessment high, while fixing it at a percentage of the net produce made it unequal; and to them may be attributed its failure, rather than to the venality of the native establishments employed in carrying it into execution. These may have been bribed in numerous instances to effect a reduction of the rates, but this would have tended to secure the success, rather than involve the failure of an assessment; and that they should systematically over-assess inferior and uncultivated lands without the prospect of gain, and at the risk of detection, appears to me very improbable. I have dwelt at this length upon the survey assessment at the risk of being thought tedious on a question not immediately bearing upon my subject, that by exposing the sources of error which, in my opinion, occasioned its failure, my superiors may be better able to form a correct estimate of the principles on which the present revision has been conducted.

11. In his 9th, 10th, and 11th paragraphs Lieutenant Nasf

gives an account of the manner in which the revised rates were obtained, after which he proceeds to consider the new assessment with reference to the Survey, Kumal, and Tunka settlements. The Tunka assessment of the pergunna, as it appears from his 12th paragraph, amounted in round numbers to Rs. 1,22,000, the Kumal to Rs. 2,28,000, the Survey to Rs. 2,03,000, and the present revised assessment to Rs. 84,000. The last will doubtless appear a startling reduction, but it will afterwards be shown that it is so upon paper merely ; and it must be recollected that the district never prospered but under the Tunka settlement, that the Kumal could not be realized during even the height of the Maratha prosperity ; and that the collection of the Survey assessment was obliged to be suspended almost immediately subsequent to its introduction. The continued fall in the prices of corn which has taken place of late years, and the little prospect of any improvement in this respect, imperatively calls for a great reduction of former rates : and Lieutenant Nash shows clearly that the present assessment, low as it is, yet, considered as a commutation for a corn rent, is but inferior to the Kumal itself. "The Kumal assessment of 2,28,000 Rupees is a commutation," he says, "for 5,472,000 seers of grain, at 24 seers per rupee, and this rate is not a high one for that time, as tables Nos. 1 and 4 will prove ;" while the present assessment of 84,000 Rupees is a commutation for 452,000 seers at the rate of the average price of corn here for the last five years, viz. 53 seers for one rupee.

12. Lieutenant Nash then proceeds to show that, notwithstanding the apparent lightness of the present assessment, Government has already been a gainer thereby to a very considerable extent. From his 17th paragraph, and table therein referred to, it appears that from Fuslee 1235 to 1245, excluding 1242, a year of scarcity, the average collections on account of current year's revenue amounted to Rs. 32,802, and that Rs. 48,020 is the largest sum collected on account of current revenue in any of the fourteen years preceding Fuslee 1246, when the revised assessment was partially introduced the remissions on account of failure of crops were Rs. 4,378-14-6, the net revenue Rs. 51,389-1-0, of which



Rs. 50,198 were collected during the official year and in Fushlee 1247 when the revised assessment was first brought into general operation, and notwithstanding a rather unfavourable season, the remissions on account of failure of crops fell to Rs. 2,401-2-2, the net revenue was Rs. 52,391-0-4, of which Rs. 52,234-5-2 were collected before the termination of the official year. Such are the immediate results of the present settlement, and they must be admitted to be most satisfactory as far as the interests of Government are concerned, and to afford a cheering proof that these are inseparably connected with, and dependent upon, those of the people.

13. Although the preceding observations, with numerous other arguments adduced in Lieutenant Nash's report, may be deemed to afford sufficiently convincing proofs that the present settlement is not too light, yet believing in the paramount importance, the absolute necessity of imposing, in the present depressed and impoverished state of the Deccan, the most moderate assessment at all consistent with the conservation of the finances of the State, I trust to be excused in devoting a few additional observations to this part of my subject.

14. When the Deccan fell into the hands of the British Government its condition was comparatively flourishing, and its present lamentable state of poverty I ascribe chiefly to the circumstance of an onerous land tax having been retained after the precious metals had greatly increased in value, owing, as happily described by Lieutenant Nash, to "the ebb from Maharashtra of the wealth and riches which the tide of fortunate plunder had brought in." Had this inevitable consequence been foreseen, and the land tax timely reduced to meet the altered circumstances of the country, twenty years of peace and security could not have resulted in general poverty and wretchedness, but on the contrary would have found the now half-deserted villages of the Deccan filled with a thriving and contented peasantry amid a constant fluctuation in the value of the precious metals.

15. The value of corn necessarily renders a fixed money assessment one of a most variable nature. In a very few years

subsequent to its imposition an increase in the value of money may make that onerous which was originally light, and therefore in making a settlement intended to be permanent, this imposes the necessity of doing so with reference to the price corn *may fall to*, rather than to an average price, or that to which it may probably rise to. The data top procurable for fixing an assessment must be considered only as rough approximations to the truth, instead of being absolutely correct, and we must not therefore be implicitly guided by them, but making every allowance for errors, fix our assessment sufficiently low to secure its remaining unaffected by their occurrence. Such are a few of the considerations urging the policy of a low assessment; there are others connected with the improvement of the land and the condition of the agricultural population which I shall now proceed to touch upon in treating of the term for which the present settlement should be declared permanent.

16. Government has already determined that the present settlement should last for ten years; but I would respectfully submit that this is much too limited a term to admit of the resources of the people being greatly increased, or to hold out much inducement to undertake permanent improvements involving any considerable outlay of capital. It would tend indeed to retard rather than advance such objects, by creating a distrust of our intentions. at the expiration of the term, an apprehension of the assessment being then raised in proportion as the land had increased in value, which would effectually prevent any expensive improvements. Besides a better system of tillage, which may be hoped for from a moderate assessment, the most general improvements likely to be undertaken are the construction of wells and bunds with the view of converting Jerayet into Bagayet land, both of which, however, require in general an expenditure of capital which it would require many years to repay.

17. The most certain way of giving an impulse to agricultural industry,\* and attracting capital to the improvement of land, would be to create a private property in the latter by declaring the present settlement to be permanent; but should Government

be averse to compromising its claims to such an extent, I would strongly advocate the policy of extending the present term to a period of at least thirty years, which would afford time for the renovation of the dilapidated resources of the country, and hold out to the cultivator a fair prospect of obtaining an adequate remuneration for any outlay he may feel inclined to make in the improvement of his estate. Such a term would secure many of the advantages of a permanent settlement, and by rendering land saleable tend to bring it into the possession of people of capital, and thus check, in some measure, the continued subdivision of property arising from the laws of inheritance, which threaten to retain for ever the cultivating classes in the condition of mere labourers, and to prevent the accumulation of wealth, with its attendant advantages of an extension of commerce and manufactures.

18. The 23rd and following paragraphs of Lieutenant Nash's report contain an account of his proceedings in carrying into effect the instructions of Government to impose an additional tax upon all Bagayet lands watered from wells. There is very little "Kuddum" Bagayet (irrigated land which paid an additional tax under the Mamool settlement) in the Indapoor Pergunna, and the imposition of the present rates may on this account be viewed with some little dissatisfaction at the outset ; but they are so low that I think it impossible they can interfere with the extension of Bagayet cultivation, or afford any real ground of discontent. From the circumstance of their not having yet been brought into full operation, however, we do not possess the requisite experience to enable us to pronounce with certainty upon their merits.

19. Before concluding this Report I shall venture to add a few observations regarding revenue management, upon which must in a great degree depend the successful introduction and stability of any assessment. The moderation of the present rates has hitherto greatly encouraged, and, it is hoped, will not hereafter present any obstacle to, an extension of cultivation ; upon this account I conceive no cowl should be given for the purpose of breaking up waste lands, except in very particular instances, where the outlay required is unusually great. The quantity of land

now under cultivation in Indapoor is much too great for the means of the cultivators, and this circumstance must tend to retard their advancement. For the same reasons I am of opinion that no efforts are required on the part of the Collector's establishment to induce the ryots to extend their cultivation, or to deter them from relinquishing what they now hold. A cultivator must be much better able to judge than the Government authorities of the proper time to extend or contract his agricultural operations, and the slightest interference with his freedom of choice in this respect will be injurious to his interests. Such a system of interference in the Sub-Collectorate of Sholapoor, and, I fear, throughout the Deccan, has been productive of incalculable evils, and perhaps as much as the weight of the assessment itself has contributed to reduce the cultivators to their present state of poverty and wretchedness, and to occasion the slovenly inefficient system of tillage now prevailing.

20. I am not here bringing forward a theory, but simply stating facts coming under my own observation, and which are the necessary consequences of the system pursued for forcing cultivation. The district and village authorities, with the view of obtaining a character for diligence and efficiency, and exhibiting a nominally large rent-roll, have been accustomed to use every expedient, whether of persuasion or intimidation, to prevent land being thrown out of cultivation, and this with little or no regard being had to the means of the cultivator, who upon sustaining any reverse, such as a mortality among his cattle, instead of being permitted to contract his concerns to meet his diminished resources, has been obliged to retain the same quantity of land under cultivation, and continue to pay the same revenue when no longer able to raise the same quantity of produce. These measures, which were followed of course by a call for large annual remissions, obliged those subjected to their operation to resort to a wretched system of cultivation, and generally ended in ruining them altogether.

21. I wish I could persuade myself that the representation here given is at all overdrawn, but I am unable, and would,

therefore beg to press upon your consideration that in such a state of things no assessment, however moderate and just, can have a *fair* trial. To cultivate properly any quantity of land requires a certain number of cattle, agricultural implements, &c., and any attempt to increase the former without adding to the latter must necessarily fail; and the undertaker would find that while obliged to pay an additional assessment on account of his new land, the produce of that and his old taken together would not amount to what he had been in the habit of receiving from the latter alone. Any interference, then, on the part of Government officers, which induces a ryot to take up more land than he has the means of properly cultivating, operates exactly in the same way as if the assessment of his original holding had been increased by the whole amount of revenue receivable from the land so taken up.

22. — There is another point of importance to the stability of the present settlement, and that is the preservation of the boundaries of fields as now laid down. The necessity of such care was strongly urged by Mr. Pringle upon the completion of the survey of this collectorate; but the measures adopted in consequence have failed in effecting the ends in view, and it has been found that, after the lapse of 10 years only, a very large proportion of the boundaries of fields laid down at the survey has been changed or wholly obliterated. Your late orders respecting the annual inspection of every field in the pergunna, and the preparation of “numberwar keerds” for each village, if rigidly acted upon, will do much to effect a remedy; but in addition to this I would suggest that the Kumavisdar and his carkoons be directed to take particular notice of every infringement of a boundary for which the owner of the field should be summarily punished. The imposition of a slight fine would probably be found sufficient, and a little vigilance on the part of the district establishments during the ploughing seasons, when such encroachments are usually effected, would do much to put a stop to the practice.

23. The adoption of the foregoing suggestions would, in my humble opinion, be of great service towards ensuring the success of the present settlement, which even now, it is pleasing to state,

has been productive of the happiest results. As observed by Lieutenant Nash in his 22nd paragraph, "the cheerful and contented looks of the peasantry, and the marked improvement in their dress, bear witness to this," while the return of many of the old Meerasdars, the eagerness displayed in contesting the possession of land, and the rapidity with which every description is being brought under cultivation, afford satisfactory evidence upon the same point. If Providence favour us for a few years with a succession of tolerable seasons, a marked change for the better in the condition of the people, the agriculture, trade, and manufactures of the districts may confidently be anticipated.

24. Instead of confining my observations to the pergunna of Indapoor alone, you will have observed that they are frequently applicable to the general question of a revision of assessment throughout this collectrate, which has been done through my anxiety on the eve of enlarging the sphere of our present operations, to place before Government the fullest means of judging of the value of the principles by which our measures are to be conducted, to afford opportunity for receiving further information regarding points left unexplained or obscure, and time to point out and correct whatever in the system is erroneous in principle and defective in operation. •

I have the honour to be, &c.

G. WINGATE,

Superintendent Revenue Survey.

*Poona, 31<sup>st</sup> July 1839.*

*P.S.*—While penning the preceding report, my acquaintance with the principles upon which the survey assessment was conducted was confined to the information contained in the Maratha records of the undertaking, and the incidental notices regarding it, scattered through the different correspondence connected with the revision of that assessment. Subsequently, however, I have been furnished by Mr. Secretary Reid with Mr. Pringle's able and perspicuous report of the 6th September 1828, addressed to

Mr. Chief Secretary Bax, and which contains a full exposition of the principles by which Mr. Pringle's assessment was conducted, and displays the deep research and minute investigation which were devoted to the consideration of all the grounds on which such principles can alone be securely based.

2. I cannot here refrain from expressing my regret that I was not earlier placed in possession of documents displaying so fully the enlightened and scientific basis of the assessment upon which it was become my duty to comment, and that the anxiety of Government to obtain Mr. Nash's and my own reports upon the completion of the settlement of the Indapoor Pergunna will preclude the possibility of our availing ourselves of the knowledge we now possess, by adding to our observations, so as to remove from them any appearance of a want of consideration in our remarks upon past operations, and of inattention to the principles by which they were conducted.

3. Mr. Nash and myself attribute in our reports the failure of the survey assessment to the circumstance of its having been fixed with reference to the "net produce" instead of the "rent of land." In reading with attention Mr. Pringle's report it is impossible to resist the impression, that these two terms have been considered synonymous, and that while he calculated his assessment on what is strictly the "net produce," that what is left to a tenant after defraying all expenses of cultivation, he spoke of its operation as though it had in reality been based upon the "rent," or what that tenant could afford, *suitably providing for himself*, to pay from that sum to his landlord.

4. "Net produce," says Mr. Pringle in the 11th paragraph of his report already quoted, "is that portion of the whole money value of the average gross produce estimated at an average price which remains after deducting all outgoings on account of labour and capital, each item of these being calculated at its ordinary and average rate." And strictly in conformity with this sketch, of which the details are given in his 19th paragraph, were the expenses of cultivation of every description of soil calculated by the

survey assessment; and it may here be remarked as an important fact, which I shall presently allude to, that their calculations exhibit in all instances, and for every variety of soil, a considerable portion of the gross produce remaining after all expenses of cultivation have been deducted, which is termed, and termed justly, "net produce."

5. That Mr. Pringle, however, conceived this to be "rent" appears clearly from his 39th and 40th paragraphs, wherein he states it to be "the general tendency of his assessment to place all lands exactly in the same relative position which they would naturally hold if no assessment existed at all; that is to enable them to yield a rent to the owner, progressively increasing in amount from the worst to the best soils according to their quality." Again, "if the whole of the net produce were exacted, the productive energies of the country would be greater than they could be under any mode of raising the same amount of taxation, but property in the soil would be annihilated." Such observations, however, can only possibly be true of "rent," which, as stated by the Right Honourable the Governor in Council in a letter to the Revenue Commissioner, dated 4th May 1838, No. 1698, is "greatest on the

\* Including the farmer's profit.

† Net produce.

most fertile land and decreases on worse soils, until we come to the very worst, where the cost\* of cultivation absorbs the whole surplus† and no rent is paid at all;" while "net produce," as defined and practically estimated by Mr. Pringle, and in the common acceptation of political economists, is the surplus remaining after all outgoings on account of labour and capital have been paid, the fund from which the tenant must be supported and the landlord receive his rent. It is greatest on the best, and decreases in amount from that to the worst description of soil in cultivation, where it still exists, although merely sufficient to induce the farmer to cultivate such land, and being merely so, can afford no rent to the landlord. And therefore the part alluded to in the 4th paragraph of this P.S. of Mr. Pringle's cultivation, giving a considerable surplus produce for the very worst description of soils, shows that his assessment was founded on a percentage of the "net produce," and not of the "rent."



6. Any assessment therefore forming so large a percentage (55 maunds) of the net produce as Mr. Pringle's must, by absorbing the whole of the rent of inferior soils and retrenching upon the farmer's profits, throw such soils out of cultivation, until the price of grain is so raised by the demand as to permit them to be cultivated with advantage; and in this case the Government assessment, by raising the price of grain generally, would take much more from the pockets of the people than it would bring into the coffers of the State.

G. WINGATE,

Superintendent Revenue Survey.

*Poona, 4th August 1838.*

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### Appendix No. III.

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No. 2683 OF 1838.

TERRITORIAL DEPARTMENT, REVENUE.

To the REVENUE COMMISSIONER.

SIR,—I have the honour to hand up an original letter, No. 139, dated 4th ultimo, from Lieutenant Wingate, and of its enclosure from Lieutenant Nash, being that officer's report on the survey and assessment of the Indapoor Pergunna.

2. I shall merely trouble you and the Government with a few general observations on the measures which have been adopted, and on the suggestions which have been offered by Messrs. Wingate and Nash, those officers in their respective reports having fully explained every particular connected with the operations they have been conducting.

3. The Government letter of the 7th September 1835, No. 2056, discussed the several points on which the survey and assessment of this pergunna was to be based, and conveyed certain instructions for the guidance of the surveying officer. The Government will observe that neither Lieutenant Wingate nor

Lieutenant Nash give any details connected with the plans pursued for correcting the measurement, classifying the land, &c., in consequence of a memorandum furnished to me privately at my request, and I consider it a private document. Yet, as Lieutenant Wingate alludes to it, I presume he considers it official (5th paragraph); and as it may be serviceable to Government in elucidating many points noticed in this correspondence, I have deemed it my duty to submit a copy of it with this report.

4. The measurement of the different fields in a village seems to have been carried on in a manner likely to ensure accuracy. It appears, however, that the survey measurements were executed with much greater fidelity than was usually considered to be the case,\*

\* 6th paragraph of  
Lieut. Wingate's report.

and therefore there was much less labour to be performed than might from previous reports have been anticipated.

5. With respect to the classification of the soils, one uniform standard was adopted, having reference solely to the natural fertility of the soil, leaving wholly out of consideration extrinsic circumstances, such as vicinity to the village, command of water, &c. The adoption of one general standard, under all the circumstances stated, seems a judicious measure, particularly as no practical bad effects appear to have resulted from it, whilst it must greatly have tended to simplify the subsequent arrangements.

8th para. of Memo.

5th para. of Lieut.  
Wingate's report.

6. As Government (17th para.) left it to the discretion of the settling officers to fix the number of rates, Mr. Goldsmid, for reasons recorded, determined to have nine rates—the highest 12 annas per acre, and the lowest 2 annas per acre. Both the maximum and minimum rates of assessment are extremely low when compared with the Mamool and survey rates previously in operation; but as they have been fixed after minute inquiries, and in consideration of local peculiarities and the depressed condition of the ryots, it is possible they are as high as they ought to be under existing circumstances; for, as I stated in my report (18th para.) the rent to be paid per acre can be alone determined by the

judgment and experience of the settling officer, and the best means with the data at command for ascertaining the proper assessment the land should pay seems to have been adopted.

7. It must be recollected that the present state of the Indapoor Pergunna is to a certain extent fictitious. Advantageous leases and a low assessment have attracted a number of ryots from neighbouring states and from our own highly assessed districts. It remains to be seen at a future period, when the assessment in the districts bordering on Indapoor has been modified and reduced, whether the fugitive ryots will return to their paternal fields, and leave the district singularly unfortunate as regards the periodical rains, and to which they have been attracted by low rates and other advantages which they do not possess by cultivating their hereditary fields.

8. I have attentively considered the interesting remarks and observations in Lieutenants Wingate's and Nash's reports on the mode adopted by Mr. Pringle of assessing the land according to a percentage of the net produce.

9. Lieutenant Nash appears (7th and 8th paras.) to have clearly shown that the principle adopted of taking 55 per cent. of the net produce was erroneous, and was the chief cause of the inferior soils being more highly assessed than the better description of land. In the present assessment this error has been corrected, and each description of land is now assessed according to its relative value with respect to the value fixed for the first description of land, and the principle appears to be just.

10. In the 33rd paragraph of Lieutenant Nash's and 18th of Lieutenant Wingate's reports they allude to the assessment on Bagayet land. On this subject I beg leave to refer Government

No. 898, dated 18th July 1835, para. 24; No. 79, dated 26th January 1836.

to the observations contained in my letters to your address, as per margin. To tax Bagayet land is, in my humble judgment, impolitic, and seems to be directly at variance with the Honorable Court's orders, that land should be assessed according to its produce; but as the assessment has been fixed in obedience

to orders, it only now remains that the error be corrected as soon as possible before its evil consequences will be felt in checking Bagayet cultivation and throwing wells out of use.

11. The only remaining subject I shall now treat upon is the extension of the period for which the present assessment is to continue from 10 to 30 years. Lieutenants Wingate and Nash have offered some sensible observations on this subject; but the very arguments which those officers use in favour of the extension are, in my judgment, conclusive of the policy of limiting the period to 10 years, for which Government have already engaged that the present leases shall continue.

12. Lieutenants Wingate and Nash both allude to the fluctuation in the price of the precious metals as one of the principal causes which must always affect in money assessment, the vast increase of cultivation; and the prospective increase which may be anticipated in a few years, when the whole Deccan is more accurately surveyed and more equally assessed, must contribute so to raise the price of money by augmenting the quantity of produce greatly beyond the demand for it, that even the assessment of Indapoor, low as it is, may in a few years be considered too high for the cultivators to pay. Lieutenant Nash observes (22nd para.), "the price of grain is constantly fluctuating, and with it the value of the crops and the money rent of the land," and under such circumstances "a money assessment which is one year paid with ease will, if exacted from the people in the next, take from them a part of their fair portion of the produce of the earth" (22nd para.). And Lieutenant Wingate, in speaking of money assessment, observes (15th para.), "an increase in the value of the precious metals may make that onerous which was originally light." Now, as the rent to Government is paid in money, it seems for these very reasons impolitic that Government should, as far as its own interests are concerned, as well as for the interests of the ryots, pledge itself to any longer term of years for the continuation of the present settlement. It must always be borne in mind that Government must always be losers, and can never be gainers. If the value of money diminishes, or, in other words, the produce

of the soil, from whatever cause, is dear, Government cannot raise the assessment to meet the loss they will sustain ; whereas if money rises in value, or, in other words, the produce of the soil is very cheap, good policy and humanity necessarily oblige it to reduce the assessment, or the land will be thrown out of cultivation, and the ryot's circumstances so much altered that if he continue to pay the assessment he must be ruined. Though in all probability for the next 10 years there will be no alteration in the state of the country of such importance as materially to affect the present settlement, which is only to last for ten years, yet every thinking man is fully aware that within thirty years—the period during which Lieutenant Wingate wishes the assessment to last—a great alteration will take place in the moral condition of the people and the political state of the country, and I can see no good or substantial reasons for Government pledging themselves for so long a period. . .

13.<sup>o</sup> It must be borne in mind, as I before observed (7th para.), that the present prosperous state of the Indapoor district is the result of low rates of assessment and advantageous leases, and not of an increased demand for the produce of soil. It may therefore justly be considered fictitious, and its continued prosperity and flourishing state to rest in a great degree on the continuance of the present state of the districts which surround or are contiguous to it. The moment the assessment in those districts is reduced, so that a fair profit will be left to the cultivator, we shall in all probability find that the cultivation in Indapoor will decline. Lieutenant Wingate even now observes (19th para.) “that the quantity of land now under cultivation in Indapoor is much too great for the means of the cultivators, and retards their advancement.” It must also be recollected, as well observed by the Revenue Commissioner, that the supply of rain is singularly precarious in the districts ; and should any season of drought occur, it is fair to presume that the ryots, who are not permanent occupants of the soil, or Meerasdars, will return to their paternal fields, which they may only have left in consequence of over-assessment, and which may be situated in districts where the periodical rains

are less precarious, and where a reduction in the rates of assessment may offer them exactly the same advantages they enjoy by cultivating land in the Indapoor district.

14. From the remission of the transit duties and other numerous taxes which have hitherto fettered the energies of the people, and from the progressive improvement of the country by the construction of roads, and, above all, the moral improvement of the people by education, &c., Government have every reason to anticipate that the utmost activity, both in agriculture and commerce, will in the course of a few years prevail. How far, and to what extent these consequences may affect the land assessment it is impossible to say, but that they must affect it there can be no doubt, and Government should therefore in no degree pledge themselves to any system or measure so liable to fluctuate as the land assessment beyond that period necessary to give encouragement to agriculture in a district like that of Indapoor.

15. For all these reasons I strongly dissent from the proposition to extend the present lease to thirty years.

16. I quite concur in the observations in Lieutenant Wingate's 19th para. if, as I understand them to apply to the Indapoor district in its present state, no Cowl under such a low assessment as has been fixed should be granted, except in very extraordinary cases, when a large capital is embarked in any scheme or improvement. When the other districts of the collectorate have had their land assessment modified, a similar course should be adopted.

17. The subdivision of property alluded to by Lieutenants Wingate and Nash, and the practice of marrying early, are no doubt evils of great magnitude, and have in all probability tended to retard, as they must tend to retard, the advancement of the natives to opulence. The tendency of these religious or civil institutions is to prevent the rise of a class of wealthy individuals whose capital might be advantageously disposed of in improving their agriculture or in increasing their merchandize. The immediate descendants of the fortunate possessors of wealth dwindle down to that scale from which their ancestor may have emerged by his

industry or ability, and the wealth which he acquired becomes so subdivided amongst his descendants that it enables the possessor to do little good with it, and adds but little. As these evils are they cannot be, and must not be, interfered with. It must be left to education to improve the moral condition of the people, and they will themselves then see the good and sound policy of not marrying their children at so early an age as they now do, and of deviating from the principle they now observe of subdividing their property amongst their children; for, as justly observed by Lieutenant Nash, "education appears to me to be as much the means of giving security and increase to the Government revenue as of improving the moral and mental condition of its unenlightened and unfortunate but teachable subjects."

18. I beg to forward a statement of all expenses incurred in surveying and assessing the Indapoor Talooka, as called for in the 2nd para. of a letter from Government to my address, No. 3309, dated the 3rd instant.

I have the honour to be, &c.

R. MILLS,  
Principal Collector.

*Principal Collector's Office, Poona,*

*20th September 1838.*

## Appendix No. IV.

No. 2297 OF 1838.

TERRITORIAL DIVISION, REVENUE.

To L. R. REID, Esq.,

Acting Chief Secretary, Bombay.

SIR,—In reference to the latter part of the 21st para. of your letter (No 1489), dated 19th April last, I have the honour to submit a report from Lieutenant Nash on the mode in which the survey and revision of the assessment has been conducted in the Indapoor

Talooka, the only district of the Deccan in which those operations have been completed.

2. The new settlement has been the basis of the revenue settlement for the last two years; and what makes this report particularly interesting, and, I may add, satisfactory, is the evidence it contains of the success of the important settlement which is the subject of it.

3. The survey and assessment as regards Indapoor may be briefly described as follows:—

1st.—The survey *measurements* in acres have been carefully tested, or, where any considerable error has been discovered, the land has been re-measured.

2nd.—A new *classification* has been made of the land according to its soil, situation, and other capabilities for cultivation, and every field has been entered under one or other of the nine classes.

3rd.—The boundaries of those fields where they had previously been lost have been ascertained and marked afresh.

4th.—A complete *land register* has been framed in which the name, number, position, boundaries, tenure, extent, class, distance from the village, and all other particulars relating to the fields have been carefully entered.

5th.—An assessment has been fixed on the land according to its class and capabilities.

6th.—The land has been let out on 10 years' *leaser* at the assessment so fixed, each man's holding and the assessment he has to pay being so described in the lease as to leave little room for defrauding either him or Government.

7th.—The whole work has been conducted on a system of such strict checks and supervision as to guard, as far as possible, against errors arising either from carelessness or fraud.

4. It now remains to be seen what effects have been produced by these improvements, as they must be acknowledged to be, when it is considered that, previous to the commencement of this work,



neither the measurements, boundaries, nor classifications, as entered in the records, could be depended on as correct; that the assessment was so heavy that little more than one-third of the arable land had been cultivated for the last 10 years; and that though in that period remissions were given in all but one season, and they four times in 12 years exceeded the amount left to be collected as Government revenue, yet the latter was collected with so much difficulty that heavy balances were left unrealized at the end of the year, and the district generally was reduced to the extreme of poverty; and that the effect of the heavy assessment and all this uncertainty regarding it, was to give rise to a system of oppression and fraud to which the records of Government afford few parallels.

5. It should be premised that the nominal rental or assessment of the whole pergunna was by the—

Tirika .....	Rs. 1,02,548
Kumal .....	,, 2,28,560
Survey .....	,, 2,02,674
Present assessment .....	,, 83,818

6. The effects of the revision of the assessment as seen in the last year (which was, be it remembered, not better than an average one) were—

1st.—Since the revision commenced, cultivation has increased to an extent very far beyond what it has been for the last 12 years; and though it is difficult to compare the present acres with the vague beegas in which the land was registered previous to 1238 (1827-28), yet the quantity of land now under cultivation is *as much, if not more,* than when we first got possession of the pergunna, which was then more prosperous and cultivation more extensive than it has been before or since.

2nd.—As the nominal rental has been so much reduced, it is to be expected that the gross *Jummabundy* would be so also; nevertheless it was higher than in seven of the 19 years preceding.

3rd.—After deducting hucks and remissions, the net revenue to be collected on account of Government is higher than it was in nine, and lower than it was in ten of the preceding years.

4th.—The sum *actually collected* and paid into the Government Treasury in the course of the year—the chief point to look to in the question of mere pecuniary profit and loss to Government—*has never been so great except during the first four years of our occupation, when it is generally acknowledged our demands were much too high.*

5th.—The outstanding balances *have never yet been so low at the end of the official year as they were last year.*

7. In short, at an expense (every item included) of Rupees 12,165-14-1, or about one-third less than the average of the balances outstanding at the end of the year during the first 17 years of our possessing the country, a light and equitable assessment, paid punctually, and without difficulty by a contented and grateful body of ryots has been substituted for a heavy nominal paper assessment, never realized to its full amount, and yielding less actual cash to the Government coffers, and even that exacted from a population which was yearly sinking towards ruin.

8. That neither this picture nor the description given by Messrs. Wingate and Nash in the present reports, or by Messrs. Goldsmid and Mansfield in their two last annual reports, on the state of the district are overcharged, can hardly be asserted when it is considered that they rest, not on opinions or theories, but on facts which admit of no doubt. The money collected is in the Treasury, the Government accounts are clear of balances, and the improvements in the condition and spirit of the inhabitants are matters of notoriety throughout the zilla. The improved state of Indapoor was noticed in my letter (No. 216) dated the 26th January last, and in replying to that letter Government observed (*vide* your letter No. 1489, dated the 19th April), “The improved state of the Indapoor Pergunna, once the very centre of mismanagement on the part of our subordinate officers and oppressors of peasantry, is a source of high satisfaction to the Governor in Council. It affords an instance of successful results to which, however liberal and benevolent our measures may be, we are not always accustomed.”

9. We are apt to speak and think of the effects as if they resulted from some new principle in revenue, management, or some system which had been tried in Indapoor for the first time. Nothing, however, can be further from the fact. There was little in the principle of the present revision, or in its mode of execution, for which an example might not be found either in a good native assessment of the Deccan. The chief features which distinguish it from its predecessors are the care and attention with which all the details have been executed and the sound good sense and the strict adherence, where practicable, to former usage. Its leading principle has been to fix an assessment so moderate and so simple as to be easily and readily paid by a poor and simple population.

10. The reports of Lieutenants Nash and Wingate are so full, clear, and satisfactory that they require little comment.

There are, however, a few points in the letter from the Principal Collector which seem to call for some remarks.

11. The remarks Mr. Mills makes in his 4th para. regarding the correctness of the survey measurements  
Paragraph 4. may lead to some misapprehension, unless it

be borne in mind that they, as well as the rest of the work, are generally supposed to be less vitiated by *wilful* errors in the Indapoor Pergunna than anywhere else.

12. Mr. Mills remarks (para. 6) that the new rates are extremely low when compared with the Mamooland survey rates, though he subsequently allows that they are probably as high as they should be. It would, however, have been but fair to have pointed out that, with anything like the prices of the last ten years, the Mamool and survey rates were merely *nominal*, and never were, nor ever could be, fully realized; and it would not have been out of place had Mr. Mills alluded to that part of Lieutenant Nash's report in which he shows that, considering the prices of produce, the present assessment is very nearly the same as the Kumal and Tunka were at that time in the periods during which they were respectively in force when agriculture was most flourishing.

13. The observation made in this paragraph (para. 7) by Mr. Mills, that "the present state of the Indapoor Pergunna is

to a certain extent fictitious," is in part true if he meant that it is called flourishing, by comparison relatively with the surrounding districts, and that it would not be so called in a rich and well-managed province. There can be little doubt but that if the measures which have been pursued in Indapoor are steadily followed up in the surrounding districts, Indapoor itself will become one of the poorest from being, as it is now, one of the most (perhaps *the* very most) flourishing districts in this zilla. But there can be equally little doubt that the alteration will be comparative, not real. Of all the districts in the Deccan it is perhaps the least favoured by nature; and as those which enjoy greater natural advantages participate in the benefit of measures which have done so much for Indapoor, they will rise in the scale, and from their superiority in other respects rise higher than Indapoor. But it by no means follows, nor does there appear any reason to apprehend, that when this very desirable consummation approaches, Indapoor will any degree sink *below its present standard*. Least of all do I apprehend that the effect anticipated by the Principal Collector in the latter part of the paragraph will ever take place to any extent, simply because amongst those who have of late years flocked to Indapoor the proportion of those who are Wuttundars of our own districts is belived to be small compared to those who belonged originally to Indapoor, which they left, some as long as the ~~famine~~ of 1803-4, when they fled to the Moglaee or other foreign districts, where there is little chance of their being again driven by the advancing prosperity of the pergunnas around Indapoor.

14. I confess I do not agree with the Principal Collector and Lieutenant Nash in finding fault (para. 9) with the *principle* adopted in the late survey, of taking 55 per cent. of the net produce. Lieutenant Nash argues as though Government were the universal landlord and the cultivators its servants, and if that were the case it would undoubtedly be unjust to leave one man a greater proportionate share of the fruits of his labour than another, and impolitic to take less than what each man should receive for his subsistence. But if the object of an assessment be to impose a *land tax*, the plan of taking a certain share of the net produce is the only

one by which that tax can be fairly fixed, and it is the only means by which any interest can be created in the land stronger than that local attachment which the coonbie has for his fields ; nor is the comparatively higher assessment of inferior soils (in the sense in which the expression is used by Lieutenant Nash and the Principal Collector) which is caused by such a system to be deprecated. It is perfectly natural and most profitable for the cultivator that the best soils should be the first cultivated as those which, in proportion to the capital and labour employed on them, yield the best return, and when our fiscal arrangements invert this natural order of things it is a clear proof that there is something radically wrong in our system. Except to guard against future error, however, there seems little use in arguing the point, which, as far as the present assessment is concerned, appears to be purely speculative.

15. The Principal Collector appears to forget (para. 10) that the power of affording water for irrigation is one of the most valuable of the capabilities of land, and that to bear it in mind in fixing an assessment is therefore strictly consonant to the orders of the Honourable Court. This is a question quite distinct from that as to whether it is worth while to levy a separate assessment when the quantity of the irrigated land is so small, and where its extension is so desirable as in Indapoor ; but for my own part I see no objection whatever, as regards Indapoor, to levy a higher assessment on Bagayet than on Jerayet lands, provided that assessment is in reference to the capabilities of the land. That the new rate fixed at Indapoor is moderate there can be no doubt.

16. In this and the following para. (para. 10) the principal Collector gives his reasons for dissenting from the proposition of Lieutenants Wingate and Nash, that the present settlement should be extended for a period of 30 years if not rendered permanent. Mr. Mills first argues that by the great increase in the quantity of the grain produced beyond the demand for it, the price of the precious metals (as compared with grain) will rise so high as to render the present low assessment too heavy. To this I would answer—*first*, that even if the land were given *rent free*, the quantity of grain produced *could* never for any considerable period be augmented

beyond the demands for it; and, *secondly*, that even if the objection were a valid one to saying that Government will always take the present assessment at *neither more nor less*, it could be no obstacle to Government declaring that for 30 years or for ever it would *limit its demand* to the present assessment, and it is *this*, and not a declaration of the immutability of an assessment, which is required to give anything like permanent prosperity to the country.

17. Of the two contingencies apprehended by the Principal Collector, let it be supposed that one, viz. "an increase in the value of the precious metals making that" (assessment) "onerous which was originally light," were to happen subsequent to Government having given its ryots an assurance similar to that recommended by Lieutenant Wingate—the Principal Collector justly remarks that good policy and humanity necessarily oblige Government to reduce the assessment; and how, it may fairly be asked, would the difficulty of doing this be increased by such an assurance being given. The change in the value of the precious metals can never be caused or prevented by the *term* for which the assessment is fixed being longer or shorter, except that the longer the term the less will be the liability of change in prices of produce and everything connected with agriculture, and should that change take place so as to render the present assessment too *heavy*, it must be reduced, or the country will be ruined, whether the term be one year or a hundred.

18. But from what the Principal Collector says in his 12th para., "that Government must always be losers and can never be gainers," and from his reflections on the impossibility of Government raising the assessment, and indeed the whole tenor of his argument, it is pretty clear that it is the other contingency, viz. that by money becoming more plentiful the prices of produce will rise, which he has chiefly in view in objecting to extend the term of the assessment beyond 10 years. He appears to have hopes that the circumstances of the country may so alter after the expiration of the 10 years as to enable us to raise our demand. It is the continued pursuit of some phantom advantage of this kind which has hitherto prevented most of our districts from improving to the degree which we might fairly expect from so many years of

British Government, and which, if we persist in following, will alike effectually bar any decided amelioration in the circumstances of our subjects and in our own revenue. Even admitting that such hopes of being hereafter able to increase our demands were justifiable in most cases, what can be the advantages which the Principal Collector expects beyond the very solid ones which the present revision has secured. As regards the ryots, the assessment is lighter and more easily paid, agriculture is more extended, and the people are more contented and more rapidly improving in circumstances than at any period since we had the country. As regards Government, the district is managed without trouble; the sum which the pergunna now actually yields (and which is annually increasing) to the Treasury is more than the average since we have had the country. It is realised without difficulty or complaint, whilst little room is left for speculation or oppression setting aside the benefit which may be expected from a measure which will create a permanent interest in the land, and induce the holders to lay out capital on it. Why should we leave the only course which can secure and increase these great *solid* advantages for the sake of some vague and very uncertain hopes that we may hereafter be able to raise annually a few thousand rupees more from the pergunna?

19. This Government is, I believe, restricted from granting leases of land for more than 30 years; but it is to be hoped that, for the very sufficient reasons given by Messrs. Wingate and Nash, and for the very obvious one of continuing to the district the only system under which it has ever prospered under our rule, Government may see fit to declare that for 30 years no increase will be made in the present rates, and to request the sanction of the Honourable Court to a pledge being given, that if the opinion of the people at the end of that period be in favour of a continuance of the leases at the present rates they shall be declared permanent.

I have the honour to be, &c.

T. WILLIAMSON,  
Revenue Commissioner.

*Poona, Revenue Commissioner's Office,  
12th October 1838.*

## Appendix No. V.

No. 4739 of 1838.

To JOHN VIBART, Esq.,

Revenue Commissioner.

TERRITORIAL DEPARTMENT, REVENUE.

SIR,—I am directed to acknowledge the receipt of your predecessor's letter (No. 2297), dated the 12th October last, submitting a report from Lieutenant Nash on the mode in which the survey and revision of the assessment in the Indapoor district have been conducted, and, in reply, to communicate to you the following observations and instructions which have occurred to the Right Honourable the Governor in Council on the various points treated of in those letters.

2. The minute details, not only of the principles on which the whole scheme was conducted, but even of that part of the execution of the survey which refers to the conduct of the measurements and classifications by the subordinate agents, the regulations under which they proceeded, and the means adopted for testing their work and checking fraud, would, I am directed to remark, have been acceptable to the Government, and equally so, no doubt, to the Honourable Court. These details have not been touched upon, nor are many points connected with them to be discovered in the "sketch" or memorandum which forms an accompaniment to Mr. Mills' letter.

3. The first process in a work of the nature now reported on is the measurement of the land. In by far the largest portion of the pergunna the measurements made by Mr. Pringle's surveyors were found free from great inaccuracies. The villages in which great discrepancies were discovered were remeasured, and this preliminary part of the process was thus placed on a satisfactory footing. After the tests to which it has been subjected, the correctness of the mere measurement must be held to be established.



4. The next process is the classification of the soils. That of Mr. Pringle is denounced as worthless, and his process had therefore to be commenced anew. The system adopted of dividing all the lands into three grades is described by Lieutenants Nash and Wingate, as also the establishing a relative proportion between each different class.

5. The next and final measure of the settlement is the determination of the rate of assessment; and, in respect to this process, Government considers the information which the present papers afford as somewhat defective. The classification only goes so far as to determine the relative productive powers of soil; all considerations of the extrinsic qualities which different fields may possess, such as the facility of irrigation and of procuring manure, the vicinity of the village, the neighbourhood of good roads or markets, &c. has been studiously excluded.

6. Lieutenant Wingate in para. 5, I am instructed to state, observes that these points, though disregarded in the classification, have been carefully noted with the view of finally assisting in fixing "the assessment;" and from this it might naturally have been supposed that, by some process subsequent to the mere classification of the soil, due weight would be allowed to these qualities, which in truth affect the capability of the cultivator to pay his revenue equally as much as the possession of different classes of land.

7. Neither Lieutenant Wingate nor Lieutenant Nash, however, shows in what manner the information gathered by the Turrimis on these points has been made to bear upon the rates of assessment. Mr. Mills in his para. 5 implies (notwithstanding the passage of Lieutenant Wingate's letter above quoted) that these points have been entirely left out of the calculation. Had such been the case, executive officers ought surely to have noticed it, and to have shown the grounds on which such omission was to be defended.

8. It is difficult at present to see the connection between the rate of assessment and the classifications. The latter merely fixes the relative productive powers of each kind of soil. If these

were fixed with accuracy, and the positive productive power of one kind were known, we should have that of all the rest, and the next question would then be, what portion of such produce should form the Government demand.

9. From Lieutenant Nash's report it would seem to the Governor in Council that, in order to avoid errors similar to those which occasioned the failure of Mr. Pringle's survey, the rates have been fixed on a rough estimate of the productive powers of each field, and according to the proportion of each of the nine classes of soil which each may contain. The rates of these classes are said to have been derived from local inquiry and the experience of qualified persons, without any very minute investigation into actual produce or actual expenditure. The applicability of such rates must entirely depend on the degree in which the farmers of these were qualified for the difficult and delicate task of preparing them. There is no test to which they can be subjected, except that of experiment, for a fair series of years.

10. The discussion of the causes of the failure of Mr. Pringle's survey has led to a considerable difference of opinion between Mr. Williamson on the one hand and the engineer officers, supported by Mr. Mills, on the other. The causes alluded to are, the effect of the survey in reducing the rates on the best and raising them on the worst soils, and the assumption of the average of past years' prices as the basis of the money settlement.

11. It is on the first point that the discussion arises. Lieutenant Wingate and Lieutenant Nash urge that the system of fixing the assessment at 55 per cent. of the net profit leaves a far greater surplus to the ryot on fine land than on inferior soils, making the calculation on so much of each kind as can be cultivated at a certain expenditure. To support this view Lieutenant Wingate has framed a table, showing in a clear manner the result which will be described. This view of the subject certainly tends to remove much obloquy from the actual performer of the measurements and classifications, and from the assessors to whose venality this result was mainly attributed; but this is at the expense of the theory on which Mr. Pringle's plan is based.

12. Your predecessor, on the other hand, alleges that the view above described might be applicable between a landlord and a tenant, but that it is not so when the intention is to fix a land tax. It is not necessary, as noticed by Mr. Williamson, to carry on a discussion on the subject, for any practical purpose, in the present instance. But I am directed to observe that Mr. Williamson's principle carried to extremity will seem to end in the abolition of all difference of rate or classification, and the settlement of one uniform rate for land of all qualities.

13. Lieutenant Nash's remarks (para. 15) on the uselessness, in establishing an assessment in money, of an average of prices during a period when they have been gradually falling, and while the very causes which have occasioned such fall are actively in operation, are very just, since an assessment founded on such averages must totally be inapplicable, even to the first year of a new series; while its inapplicability will be greater and more apparent each succeeding year.

14. The financial result of the measure is shown by Lieutenant Nash in para. 17. Lieutenant Wingate carries it on to the succeeding year (1837-38) in para. 12, and Mr. Williamson shortly notices it in para. 4.

~~15.~~ This result is certainly satisfactory to the Honourable the Governor in Council, though the isolated fact of an increase of revenue, or even the absence of outstanding balances, is no unerring proof of the correctness of the system which has been adopted. The same result might have been obtained from more effective supervision having diverted from the proper channels, or it may be the effect of excessively low rates drawing cultivators from neighbouring districts at the expense of the revenue and prosperity of those they have left.

16. Under the former system, I am desired to observe, it is notorious that far more was collected than was ever allowed to flow into the coffers of the State. In certain villages, mentioned in the 28th para. of Mr. Williamson's letter of the 26th March 1838, the actual payments by the cultivators were more than double the

Government revenue ; and it may not be too much to assert that this system prevailed, though perhaps not to so great an extent, throughout the talooka. Hence it would seem that the mere amount of the receipts by Government under an ill-regulated and corrupt establishment is no fair criterion of what has been extracted from the people, or what they can fairly pay ; and supposing the malversations and undue exactions by the patels, koolcurnies, and others to have been checked (as it must be presumed they have now been), it is a self-evident conclusion that the revenue of 1836-37, supposing nothing to have been paid but to Government, must be the consequence of an enormous reduction in the rate of assessment.

17. In stating the result in para. 17 it may be doubted whether Lieutenant Nash is right in having excluded sums collected on account of outstanding balances. A district paying for a series of years Rs. 50,000 for the current year, and Rs. 10,000 for balances of those preceding, may fairly be considered as capable of paying, and as paying, Rs. 60,000 annually.

18. The effect, however, of the whole measure, as having established a low scale of assessment in this pergunna, is evident to the Governor in Council. The question is not whether it is low enough, but whether it is not too low. No one will hesitate to admit that a moderate assessment is a blessing to both Government and the people. The great difficulty is so to fix the assessment that while it affords to the State its fair dues, it shall not encroach on the just share which the agricultural classes ought to derive from the land.

19. The necessity of a reduction of assessments is discussed by Lieutenant Wingate in para. 13, &c. He explains the causes of the low prices which have obtained since our conquest, and their effect in discouraging the growth of wealth and comfort among the peasantry : while no corresponding reduction was made in the Government money rental. His remarks are just, but they are too partial. They show that the existing assessment was too

high and ought to be lowered, but they afford no data to judge of the extent to which such reduction should be carried.

20. The mode adopted for the assessment of the Bagayet is, I am directed to add, described in paragraphs 23 and 27 of Lieutenant Nash's report. It is virtually a well tax, each well being rated as being able to irrigate a certain number of acres, each acre paying a fixed assessment of Rs. 2 independent of and beyond the Jerayet rate. No mention, however, is made of Pathstul irrigation, and it may therefore be presumed that none is to be found in this pergunna.

21. The limited extent of Bagayet lands in this district prevents the question of their assessment being here of great importance. Mr. Mills in para. 10 advocates the total abolition of all extra assessments on watered lands, and supports his recommendation by an appeal to the Honourable Court's orders, that "land should be assessed according to its capability and not according to its produce." But this, as Mr. Williamson justly observes, is clearly his misinterpretation of the Court's instructions. The capability of the land depends as much on the facility for irrigation and local peculiarities as it does on the colour, depth, and other qualities of the soil.

— 22. The principle therefore on which Bagayet is assessed at higher rates than Jerayet is one which must be admitted generally; and the only question is, whether in a district such as Indapoor, where water, even for domestic purposes, is in many seasons deficient, and where therefore the sinking of new wells and the preservation of those already built, are objects of vital importance to the comfort of their inhabitants and the preservation of their cattle, it might not be advisable to suspend the operation of this principle in order to encourage these desirable results. Your predecessor has stated his opinion that the rates fixed are low, and that the country is well able to bear them. The engineer officers seem of the same opinion, and the Honourable the Governor in Council therefore considers it unnecessary to direct any change to be introduced.

23. The period during which the present survey and assessment is to be secured without enhancement to the ryots is next to be considered. Lieutenant Wingate is disposed (para. 17) to a permanent settlement, or at least to one of thirty years' duration, instead of the term at present fixed, of ten years. This reasoning is of a general nature, and applicable to the general question, whether a permanent is not, *cæteris paribus*, preferable to a temporary settlement. Your predecessor, I am instructed to state, is a strong advocate for permanency, while Mr. Mills argues on the other side, and it must be admitted that his arguments are weighty, and deserving of serious consideration.

24. It must not be forgotten that the very causes which have been cited as the grounds for the present measure are still in full operation. The price of grain is still falling, and it is impossible to say whether the average of the next 10 years may not be as much below that of the last as that was of the 10 years preceding. Where there is but one staple produce in the country, as is unfortunately the case in these districts, and that staple grain, there is far more probability of such a result than in a country producing articles of export, or for manufacture, within it, even though the value of the precious metals should remain stationary. On the other hand it is impossible to foretell what may be the result of the continuance of our rule, and of those measures for the improvement of the country and of the condition of the people, which we are gradually introducing.

25. Added to this is the consideration that the present is but an isolated experiment. The extension to the whole of the Deccan of the same measures and the same rates of assessment as those introduced into Indapoor may, the Governor, in Council conceives, be productive of results which will materially affect the now apparently flourishing condition of that talooka. Enjoying now advantages which are confined to it alone, it is not to be expected that the elevation of all the surrounding districts towards its level will not be attended with some corresponding depression of Indapoor. The height to which it has been raised may prove rather relative than positive, and, if so, an adherence to the present

measure as a permanent settlement may produce the very evils which it is so desirable to avoid.\* Numerous failures ought, moreover, to lead us to hesitate before placing ourselves in a position from which we cannot retrace our steps. It is very true, as Mr. Williamson argues, that by fixing the present as maximum rates, we can always step forward to relieve the agricultural classes by further reductions, but the present rates have not, it must be confessed, been fixed on so perfect and decisive a principle as would justify Government in limiting its demand on the land to them under every change of circumstances to which the country can by any possibility be liable.

26. The Governor in Council therefore conceives that it would be preferable to adhere to the term first fixed of ten years, say from the commencement of the present season (1838-39). Assuming that the two preceding years have been years of probation—the revision having taken place but partially in 1836-37, and having been extended throughout the pergunna in 1837-38—there can be no objection to declare the intention of Government, at the expiration of this period, to continue the settlement for a further term, should the beneficial effects expected from it be found to have resulted.

27. Lieutenant Wingate concludes his report with remarks on certain points of revenue management which have not been noticed by Mr. Williamson; these are—

\* 1st.—The impolicy of granting cowls for the cultivation of land at rates lower than the fixed assessment at present of the Indapoor Pergunna.

2nd.—The evil of the system of obliging or inducing a ryot to undertake the cultivation of more land than he may himself desire or be able fully to prepare.

3rd.—The preservation of the boundaries of fields.

28. On all these points Lieutenant Wingate's remarks are just, and you are requested to issue instructions in conformity with them to the Collector.

29. The preservation of boundaries should be the particular duty of the village officers, for it is almost impossible that any alteration can be made without their privity or connivance. It appears to the Honourable the Governor in Council doubtful whether a fine can legally be imposed on the owner of a field who thus transgresses ; but he may be subjected to the assessment on the extra land, and thus, coupled with the responsibility of the village officers, and with vigilance on the part of the Mamlutdar and his subordinates, may check the practice of encroaching on the Government waste.

I have the honour to be, &c.

L. R. REID,

Acting Chief Secretary to Government.

*Bombay Castle, 31st December 1838.*

•(True copies)

J. VIBART,

Revenue Commissioner.

(True copies)

R. MILLS, Collector.

No. 2107 OF 1867.

REVENUE DEPARTMENT.

*Bombay Castle, 4th June 1867.*

RESOLUTION.—The disposal of this subject may await the receipt of Sir George Wingate's opinion, which Lieutenant Colonel Francis will submit to Government after consulting that gentleman, and in the meantime copies of these proceedings should be forwarded to the Secretary of State.

M. J. SHAW STEWART,

Acting Chief Secretary to Government.



No. 20 OF 1867

REVENUE DEPARTMENT.

*Bombay Castle, 24th June 1867.*

TO HER MAJESTY'S PRINCIPAL SECRETARY  
OF STATE FOR INDIA IN COUNCIL, London.

RIGHT HONOURABLE SIR,

We have the honour to forward, for your information, a copy of the papers noted in the margin relative to the revision of the assessment of the Inda-poor Talooka in the Poona Collectorate.

Letter from Lieutenant Colonel Francis, Survey and Settlement Commissioner, No. 298, dated 16th April 1867.  
Government Resolution No. 1550, dated 20th April 1867.  
Letter from the Revenue Commissioner S.D., No. 2026, dated 22nd May 1867, with accompaniments.  
Government Resolution No. 2107, dated 4th June 1867.

2. It will be observed that before disposing of this subject we have resolved on awaiting the receipt of Sir George Wingate's opinion, which Lieutenant Colonel Francis will submit to us after consulting that gentleman. We shall then have the honour of further addressing you on the subject.

We have the honour to be,

Right Honourable Sir,

Your most obedient, humble Servants,

W. R. SEYMOUR V. FITZGERALD.

R. NAPIER.

B. H. ELLIS.

S. MANSFIELD.

*Revenue.*

No. 59.

*India Office London, 14th September 1867.*

To His Excellency the Right Honourable  
the GOVERNOR in COUNCIL, Bombay.

SIR,—I have to acknowledge the receipt of the despatch from your Excellency in Council of the 24th June last (No. 20), with which you forward copies of papers relative to the revision of the Assessment of the Indapoor Talooka of the Poona Collectorate.

2. As you have resolved on deferring the disposal of this question until you shall be in possession of the opinion of Sir George Wingate on the proposals of Lieutenant Colonel Francis, which the latter officer, now on leave in this country, has been authorized to obtain, I shall await the receipt of a further communication from your Government. The subject is of unusual importance, for as Indapoor is the first district under the revised thirty year's settlement of which the term is on the point of expiring, the principles now approved will doubtless be applied to the re-settlement of the other portions of the Southern Division of your Presidency, and should therefore be most carefully considered.

I have, &amp;c.

STAFFORD H. NORTHCOTE.

No. 3725.

*Revenue Survey and Assessment.*

REVENUE DEPARTMENT.

*Bombay Castle, 31st October 1867.*

Despatch from Her Majesty's Principal Secretary of State for India, No. 59, dated 14th September 1867—Noticing the despatch of this Government, No. 20, dated 24th June 1867, relative to revision of the Assessment of the Indapoor Talooka of the Poona Collectorate.

RESOLUTION.—Colonel Francis should be furnished with a copy of this despatch.

To the SURVEY and SETTLEMENT COMMISSIONER N.D. (with copy of the Despatch).

No. 828 OF 1867.

## REVENUE DEPARTMENT.

To the ACTING CHIEF SECRETARY TO GOVERNMENT.

*Poona, 7th October 1867.*

SIR,—Referring to Government Resolution No. 2107, dated 4th June last, I have the honour to submit herewith a Memorandum upon my proposals for the re-settlement of the Indapoor Talooka, prepared by Sir George Wingate during my recent visit to England.

2. Sir George Wingate's remarks upon this subject will, I am sure, be read with interest by Government, for the active part taken by him in the first settlement of the Indapoor district, and his ripe experience in all questions connected with the Survey of the Presidency, makes his opinion upon the subject peculiarly valuable. There are one or two points noticed by him upon which I have a few remarks to offer, but I shall not attempt to follow him through the course of his arguments, leaving it to Government to decide the few minor points of difference in our respective views upon what has already been recorded in the Report.

3. In paragraph 3 Sir George has indicated some further statistical information which he thinks it is desirable to place on record in this case as well as in future reports. The general returns enumerated by him have for the most part been prepared in my office, but as the Report and its accompaniments had become very voluminous, I purposely omitted them. But as Sir George attaches considerable importance to them, I purpose preparing amended returns, to be framed so as to include the additional information alluded to as well as that originally embodied in the Report. These returns shall be submitted hereafter as a supplement to the Report. A map of the district, which is specified as one of the requisite documents, has been embodied in the Report, though copy of it was not sent to Sir George in the first instance.

4. In his remarks upon statistical information, Sir George has also suggested that a regular form of return should be prepared for each district as brought under re-settlement. It would be most desirable to have a uniform system of return for all the several survey departments, as here proposed. At present each Superintendent, as a rule, adopts his own particular way of showing the statistics of a district, and as a consequence there is considerable dissimilarity both as regards details as well as in the manner of exhibiting them. The compilation therefore of a uniform return for all the districts of the Presidency, which is a most desirable measure, is impracticable. Acting therefore on the hint thrown out by Sir George, I would suggest that the Survey Commissioners, after conferring with the several Superintendents of Survey, should prepare a form of statistical return for general adoption throughout the Survey departments. As these returns are received they should be compiled by districts in the Survey Commissioner's office, which might then be made the regular statistical office of the Presidency. No expense will (at first at any rate) be incurred by the introduction of this plan, for the work could be done by the present office establishment. The form that may be agreed upon by the Survey Commissioners might be sent to Government through the Revenue Commissioners, who would thus have an opportunity of recording their opinion upon it.

5. I would draw attention to the remarks in paras. 6 and 7 upon the question of assessing lands irrigated from wells. Sir George considers that water obtained from sinking a well may be viewed as a mineral resource and be fairly taxable as such, after allowing for the expenses incurred in obtaining and making it available for irrigation. This is one of the best arguments I have yet heard in defence of the system of assessing well irrigation. For this, and for other reasons, Sir George dissents generally from my proposals for exempting lands from extra assessment on account of well irrigation. He thinks, however, that a drought-stricken district like Indapoor may be specially treated as proposed by me. If thought advisable therefore, my proposal might be held to be applicable only to Indapoor.

6. It will be satisfactory to Government to find that Sir George Wingate, though adopting a different plan of estimating the amount of the increase which may be imposed upon Indapoor at the revision assessment, has arrived at almost precisely the same result as I had worked out ; that is to say, according to his estimate the increase should be 54 per cent. upon the present assessment, and my own estimate makes it 53. So near an agreement as this upon the complicated question of the re-assessment of a drought-stricken district like Indapoor is very remarkable, and at the same time it inspires confidence in the original proposals.

Paras. 10 and 11.

7. Sir George Wingate agrees with me in the expediency of fixing the amount of local tax to be levied during the lease simultaneously with the Imperial Land Revenue, and I would particularly refer to his observations upon this subject.

8. Sir George concludes his Memorandum with remarks upon the great advantages to the State, and to the people generally, of a settlement fixed for 30 years, and liable to revision at the expiration of that period, over a settlement fixed in perpetuity. He refers particularly to a paper upon the permanent settlement question which he submitted privately some years ago for the consideration of the then Secretary of State for India. I made inquiry at the India Office for this paper, but as it was not forthcoming there, Sir George has promised to send me a copy of it, which I shall submit hereafter on its receipt.

9. In conclusion I would solicit early orders upon the Report, for I purpose, with the approval of Government, to introduce the new assessment during the early part of the coming season.

I have the honour to be,

● Your most obedient Servant,

J. FRANCIS, Lieut. Colonel,  
Survey and Settlement Commissioner.

NOTES UPON COLONEL FRANCIS' REPORT No. 147,  
DATED 12<sup>TH</sup> FEBRUARY 1867, ON THE RE-SET-  
TLEMENT OF THE DISTRICT OF INDAPOOR.

1. The first 65 paragraphs of the Report are occupied with a very interesting history of the occurrences connected with the revision of the district thirty years before, and upon this portion I shall make no remark.

2. The comparison given in the 66th paragraph of the first year of the new settlement with the last of the old is defective, inasmuch as in that year the new settlement was, I think, introduced in the Kullus division. The preceding year 1835-36 might have been compared with the year 1837-38, after allowing for the extension of cultivation in the interim caused by the revision. In the extract of Sir Bartle Frere's speech given in the 78th paragraph there is a mistake relative to the Cart manufactory set up at Temboornee in the Sholapoor districts. This establishment was instituted by Lieutenant Wingate, and hundreds of carts were supplied from it to the ryots of the neighbouring districts of Sholapoor, Poona, and Ahmednuggur. Lieutenant Gaisford subsequently introduced an improved model of a cart which was found more suitable to the Deccan, and gradually superseded all others. One great difficulty connected with the introduction of carts was the inability of the ordinary district artificers to construct or even repair them, and it would be interesting to learn to what extent this obstacle has since been removed by the greater skill of the local artificers. Are the Indapoor carts now constructed in the district, or are they purchased elsewhere; and in this case, can repairs be effected in the district without difficulty? Satisfactory replies to these queries would indicate a marked improvement in the condition of the district, brought about by the revised settlement.

3. The review of the benefits resulting from the new settlement contained in the 77th and following paragraphs up to the 107th paragraph of the report is cautious and discriminative, and calculated to give confidence in the perfect safety of the proposals

for an increase of the assessment, which Colonel Francis proceeds to found upon a consideration of these benefits. , It would, however, have added to the interest of his Report, and to our confidence in his conclusions, had the statistical information regarding the present condition of the district been more ample. It would be interesting, for instance, to know what proportion of the population is dependent upon agriculture, and what upon trade and manufactures ; what is the average size of the holdings of the cultivators ? What are their modes of husbandry ? and is the land generally well cultivated ? What proportion of the land nominally in cultivation is kept untilled for the purpose of affording grazing for the cattle, though subject to the full assessment ? What are the ordinary corn and money rents received by non-cultivating occupiers from their sub-tenants ? How does the ryot dispose of his produce ? Does he sell it chiefly at the local or distant markets, or is it handed over to the village banker in satisfaction of previous advances ? What are the castes and religions of the people, and what the numbers of each denomination ? What is the state of education, and the number and castes of the scholars ? What is the state of crime and civil litigation in the district ? What is the condition of the cross-roads of the district, and are they generally available for cart traffic, or otherwise ? A statistical report for each district brought under re-settlement comprising these and any other interesting items\* of information, accompanied with a map indicating the positions and grouping of the general villages of the district for purposes of re-assessment, and showing the course of the nearest great highways and railways would be an invaluable aid in forming a judgment as to the proper rates of assessment, and form a most important record by which the future progress of the district could be correctly estimated. The information required might be obtained from the Revenue, Judicial, and Educational departments, when not capable of collection by the Survey establishments, and for this the assembly

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\* NOTE.—Amended Returns exhibiting the information here alluded to are being prepared. See Survey Commissioner's letter No. 828, dated 7th October 1867, containing explanation on this point, and also regarding the causes of their not having been submitted with original Report.

of the various Survey and other departments at Poona during the monsoon months, affords facilities which did not exist when the head-quarters of the Survey departments were scattered over the country.

4. Besides the Chowrees and Dhurumsallas entered in the table in the 97th paragraph of the Report as new buildings erected within the last thirty years, dwelling-houses, schools, and temples or mosques might have been enumerated. The statistical table appended to the Report gives no information regarding the three last; but it appears from it that exclusive of the villages of Navee and Boree, 460 additional tiled or flat-roofed houses, 2,122 thatched have been constructed under the new settlement, and if we adopt the very moderate estimate of 100 Rupees as the value of each of the former and 50 Rupees of the latter, this would represent a capital of 1,52,100 Rupees invested in dwelling houses during the last 30 years, independent of old houses added to or entirely rebuilt; an addition also of the personal property of the inhabitants should be made on account of an increase to the extent of 9,000 sheep and goats, to the items of the table give in the 101st paragraph. Considering the imperfect nature of the experimental operations connected with the measurement and classification of the lands of the Indapoor district, Colonel Francis was, I think, right in deciding upon an entirely new classification and survey, as described in the 108th to the 125th paragraphs of the Report, but this course it is probable will only be found necessary in districts where the original operations were of a like incomplete character, and carried out before the system of laying down permanent field boundary-marks in the course of the survey operations had been matured and practically carried out.

5. The principles on which the revision of assessment should be based, as described in the 128th and 134th paragraphs, appear to be quite sound so far as they go, but they should not be considered to embrace every case, as it is possible that occasions may arise for raising the assessment upon grounds not specified in any of these paragraphs.

6. The question of excepting improvements made with the



cultivator's capital, considered in the 135th and following paragraphs, is an important one, but demands very careful consideration in its practical application. The Survey Act limits the discretion of the revising officer more than is perhaps desirable by the enactment in the concluding part of Section 30; that "such revised assessment shall be fixed, not with reference to improvements made by the owners or occupants from private capital or resources during the currency of any settlement under this Act, but with reference to general considerations of the value of land, whether as to soil or situation, prices of produce or facilities of communication." Colonel Francis considers that this provision clearly exempts land brought under irrigation by the construction of a new well, or the repair of an old one, from the imposition of additional assessment on that account. I am not satisfied of the correctness of this view, and although a decision may not be of much importance in the case of Indapoor, it may be, and probably would be so in other districts where well irrigation is extensively carried on and admits of great development. The application of the cultivator's capital to the construction of a new well or the repair of an old one does not *create* water for irrigation, but simply provides means for raising the water, stored in the subsoil, to the surface and applying it to the land. The well is the production of the cultivator's capital, but the water is not. The operation is exactly analogous to the opening of a new mine, until which time the subterranean mineral lies useless to man and yields nothing to the proprietor of the land in which it exists. But when once capital has supplied the means of bringing the mineral to the surface in a form suitable to man's wants, it immediately acquires value, and yields a rent or royalty to the proprietor of the land from which it is extracted. Water, like minerals, is a subterranean product, of great value in tropical climates, and therefore capable of legitimately yielding a rent to the lord of the soil, who is the Government in the present case. Colonel Francis estimates the average cost of the new wells constructed in Indapoor at 400 Rupees each, 5 per cent. on this capital, i. e. 20 Rupees, with an addition for the replacement of the capital in 50 years, which may be considered as the duration of an ordinary well, together with an

allowance for annual repairs, say 10 Rupees, thus making 30 Rupees in all, would be an adequate return to the cultivator for the expenditure of his capital; and if the additional value conferred upon the net returns from the land irrigated from the well over and above those obtained from it when cultivated as dry crop should exceed 30 Rupees, then this surplus forms the value of the water which was previously an undeveloped capability of the land, and may most legitimately be made the subject of additional assessment.

7. I am unable therefore to agree with Colonel Francis in considering the conversion of dry crop into garden land by the construction of a new well or the repair of an old one, to be in all cases excluded from increase of assessment by Section 30 of the Survey Act. I would not, however, propose to apply to such land any higher rate of assessment than the maximum dry crop rate which Colonel Francis has recommended, though I think it might be desirable to record all land irrigated from wells separately from the ordinary dry crop, with the view of presenting accurate statistics of the settlement, and of facilitating the imposition of special rates of assessment on garden land at a future settlement, should that course be then deemed desirable. It may be further mentioned in support of this suggestion, that should the district ever be brought under irrigation by means of a Canal from the Moota or other river, which is referred to in the 189th paragraph of the Report, the saturation of the soil by this means would probably give a great extension to well irrigation, so that the question of an additional assessment for that description of cultivation might rise into importance.

8. New rice land made out of dry crop land at the ryot's expense, Colonel Francis also considers to fall under the exemption contemplated in Section 30. This view does not seem to be so open to question, though a good deal might be said on the subject of the situation of the land and the additional value of the produce resulting from its conversion into Rice lands. Where the situation is favourable so that the return is large compared with the expense of conversion, this higher value is due as much to the

inherent advantages of the locality as to the application of the cultivator's capital, and a higher rate of assessment might on that account without unfairness be imposed, and as the question is not a practical one in the case of Indapoor, which is not a rice-growing district, I think it would be impolitic for the Government to foreclose it before the revision of the settlement of a rice district comes on for consideration, and however it may be settled, the converted land should, I think, be recorded in the Survey registers as Rice land, in order to preserve correct statistics of the cultivation at the time of settlement.

9. I agree with Colonel Francis in the propriety of imposing hereafter a building rate instead of a lump sum on land appropriated to building purposes; but I do not consider that the amount of such a rate would in all cases be satisfactorily determined beforehand at the revision of a Survey Settlement. Such land in certain cases, owing to the rapid increase of towns, might become of very great value, so as to render inapplicable any rate deduced from a consideration of these towns at the time of the Survey Settlement. Such cases would appear to be best provided for by special decisions as they arise, and in the case of towns having Municipal revenues, the building rents being due to building speculations by the townspeople, might, I think, justly be considered as belonging to the Municipal rather than to the general revenue.

10. Colonel Francis explains in the 141st and following paragraphs of his Report his recommendations for the revision of the Indapoor rates of assessment, which he chiefly, and very properly in my opinion, bases upon the alterations that have taken place in the prices of agricultural produce during the last 30 years. He gives a table of these prices in the 146th paragraph of his Report, which he divides into 3 equal decennial periods, showing the average price of Jowarree, the staple product of the district, to have been  $56\frac{1}{2}$  seers per rupee for the first,  $45\frac{3}{4}$  for the second, and  $26\frac{1}{2}$  for the third, and he concludes that the assessment at the close of the first decennial periods was not light when gauged by the prices of that period, and that the cultivators were

not in a position to pay a higher assessment. He infers therefore that it was not till "towards the end of the second decennial period the cultivators had acquired *that amount of capital and that well-to-do position* which we would assign to them as the increase of profit to be left after payment of the Government assessment." And he concludes that this average of 42 seers per rupee should be taken as the index or starting-point for estimating the increase which may be made to the present assessment in consequence of the further rise of prices which took place in the last ten years of the settlement, and which he shows in the 156th paragraph to have been between 50 and 60 per cent. for which he proposes to provide by fixing the future maximum rate at 1 rupee per acre, which will raise by 53 per cent. the present assessment of the district. The increase here proposed seems to me to represent very accurately what is due to the altered circumstances of the district without taking into account the extraordinary rise in prices during the last five years, due to the American war, and which Colonel Francis in the 149th paragraph himself considers to be exceptional. But while agreeing in the accuracy of his general conclusion, I am unable to assent to the theoretical reasoning by which he supports it, for this requires us to admit that the rates of assessment during the first period of ten years were too high, which is contradicted by the marked extension of cultivation and amelioration in the condition of the cultivator which took place during that period. There can be no doubt whatever that during that period the district made considerable progress, but as prices did not rise, there was nothing to call for an increase of assessment, though there was sufficient improvement in the condition of the district to show that the original Survey assessment had not been pitched too high. During the latter half of the second decennial period and during the whole of the third the wealth of the cultivators increased of course more and more rapidly under the influence of the ever-rising prices, and this affords valid reasons for increasing the rates of assessment. The true inference appears to be that the original rates were suitable, and we should regard the prices of the time when they were settled as the index or point of departure by which

to regulate the increase to be now made, instead of the latter years of the 2nd period, as assumed in the argument of Colonel Francis. If the table of prices be attentively examined without reference to equal decennial periods, it will be found capable of subdivision into three well-marked periods. The first is a period of low stationary prices without any more marked oscillations than may be fairly ascribable to seasons of comparative abundance or scarcity. This period embraces the 14 years from 1836-37 to 1849-50, when the average price of Jowaree was 54 seers per rupee, or almost the same that was obtained at the introduction of the settlement, the average price for the 5 years preceding that event having been  $53\frac{1}{2}$  seers. The second period is of 11 years, from 1850-51 to 1860-61, and is one of advancing prices, due probably to the increasing wealth of India arising from the introduction of English capital for the construction of the Railways and for suppression of the mutinies, as well as from improvements effected in the internal communications of the country. The average price of Jowaree during the whole 11 years of this period was 39 seers, and for the last 5 years of it 35 seers per rupee. The 3rd period extends over the last 'five years of Colonel Francis' table from 1861-62 to 1865-66, during which prices received another extraordinary advance, due to the increased demand for Cotton, arising out of the circumstances connected with the American war. The average price of Jowaree for these 5 years was 18 seers per rupee.

11. The last period is of so entirely exceptional a character, and the prices then obtaining are so clearly due to temporary causes, that it would be most unsafe to take them into account in the formation of a basis for a revision of the rates of assessment intended to last for another term of 30 years. The price of cotton, upon which the price of Jowaree and other agricultural products in a great degree depend, has already fallen considerably since Colonel Francis' report was written, and is likely to fall much further. This has already affected the exchanges, and will materially diminish the amount of bullion to be received by India in the present year. This effect it may be anticipated will be experienced to a greater extent in future years until prices recover their normal condition, which it would not, I think, be

safe to estimate at a higher figure than those obtained during the last five years of the second of the above periods, when Jowaree was sold at 35 seers per rupee.

12. The average price of the preceding period being 54 seers, the former indicates a rise of price equivalent to 54 per cent., which is the amount of increase upon the present rates of assessment that may fairly be imposed on taking into account the rise that has taken place in prices since the former settlement was made. This is as nearly as possible the amount of increase which the rates proposed by Colonel Francis will effect, as he states in his 158th paragraph that the increase will be 53 per cent. If there were a prospect amounting to anything like a certainty of the high prices of the American war period continuing, then a very much greater increase than this would be justifiable. The prices of the last five years are 200 per cent. above those that obtained when the original rates of assessment for Indapoor were introduced, so that these might be trebled without danger to the prosperity of the district if the American war prices were to continue through the next thirty years; but, as I have said, we have no warrant for concluding that this will be the case, or that prices will certainly range above those immediately preceding the outbreak of the war. It may be that the developing trade and improving condition of the communications of the country will cause prices to rise still further; but on the other hand we have to take into account the lowering influence of the heavy tribute India will have to pay to England for the future in the shape of Home Government charges, and interest of capital provided for her Railways and other public works. A very large export trade will be necessary to provide this, and if at any time the demand for Indian commodities should fall off to an extent that would make it needful to transmit bullion to England to meet these charges, prices in India would rapidly fall. Prices in India may then be said to be dependent on the capability of its export trade to pay for, not its imports alone, but also the Home charges and the interest of borrowed capital, in addition to the annual supply of the precious metals

consumed by India in manufactures and coinage. This is a critical state of affairs, and is likely to render prices of agricultural produce unstable. It would not then be safe to adopt a high standard of prices in revising the Survey Settlements, and be every way better to make the new settlements as liberal as the exigencies of the State will permit. Colonel Francis' proposals fully meet these conditions, and though it might be urged that they are needlessly liberal, as, independently of the American war, prices would have gone on advancing, still we cannot be certain of this, and an error on the side of liberality is a safe one, as it must be promotive of the prosperity of the district.

13. Colonel Francis proposes to assess all the villages of the district at one uniform rate, with the exception of the chief market town of Indapoor, for which, in consequence of its advantages, he suggests a higher rate in consequence of the rain-fall there being somewhat less certain than in the rest of the district. No further modification of the general rate is made in consideration of greater facilities of transport possessed by some parts of the district as compared with others. Colonel Francis states in his 105th paragraph that it is difficult to put a special value upon the increased facilities of transport that have been created since the former settlement was made. These increased facilities must be mainly dependent on the high-road and rail-road from Poona to Sholapoor, both of which have been opened within the last few years. Both I think enter the district at its north-western corner, and the road passes on through the town of Indapoor, keeping chiefly to the northern side of the district, while the railway keeps still further north, and only lies for a few miles within the limits of the district. The benefits arising from both constructions must therefore, I think, be more largely enjoyed by the villages whose lands slope towards the Bheema River, which forms the northern and eastern boundary of the district, than by the villages on the other side of the district, sloping towards the Meera River, which forms the southern boundary. These differences of advantage I should imagine to be sufficiently great to warrant a difference being made in the rates of assessment on that account. These differences

would be indicated by the prices of grain obtained in the several villages where there were markets there, but as Colonel Francis has viewed the prices of grain for the chief market town of Indapoor as applicable to the whole district, it is probable that he has not deemed the variation in prices due to distance from the great means of communication as of sufficient magnitude to call for any corresponding modification in the rates of assessment.

14. Colonel Francis intimates in the 179th paragraph of his Report that in addition to, and independent of the assessment imposed on the district on account of Imperial Land Revenue, a further separate cess of one anna per rupee will be levied for local improvements, and he recommends that, although Section 29 of the Survey Act provides that the 30 years' guarantee shall be limited to the Imperial Land Revenue, it should be extended also to the cess for Local improvements. Section 29 just quoted includes the imposition of a cess for the use of water for irrigation provided at the expense of Government, but I presume that Colonel Francis does not mean to include this cess under that for local improvement, to which he proposes to extend the guarantee so as to prevent anything more than one anna per rupee being levied on that account during the next 30 years. On this understanding, I entirely concur in the arguments used by him in the 179th and 180th paragraphs in support of his proposal, for I fully share his conviction, that the imposition of cesses on the Land Revenue for any purpose whatever in excess of the amount fixed for collection at the introduction of the settlement, would be viewed by the landholders as a breach of the 30 years' guarantee, and tend to weaken their confidence in the stability of the settlement which it is of so much importance in every way to strengthen. The limitation of the cess of one anna per rupee for so long a period as thirty years may be viewed as interposing a serious bar in the way of future undertakings for the improvement of the district; but should this be experienced, the Government would still be free to raise the requisite funds for local improvements, by means of local taxes independent of the Land Revenue, and it would be far better to do so rather than weaken the landholder's



confidence in the value of the Government guarantee upon which the success of the Survey Settlements, and the future investment of capital in agricultural improvements, mainly depend.

15. Colonel Francis in the following paragraphs to the 186th recommends that the revised rates of assessment he has proposed should be declared incapable of increase for another term of thirty years, instead of the adoption of a permanent settlement by which the State would be for ever debarred from any prospect of further increase from the Land Revenue. This is a very important and large subject, requiring for its adequate discussion the consideration of many questions, which I think it unnecessary to enter upon here, as I had an opportunity some years ago of submitting privately for the consideration of the then Secretary of State for India my views upon it in a memorandum \* which I have not at present by me, but of which I hope to obtain a copy for Colonel Francis, to be appended to the present paper. The views taken in this memorandum entirely support the recommendations made by Colonel Francis, limiting the guarantee to 30 years, and thereby enabling the Land Revenue to participate, at the expiration of that period, in any improvement in the condition of the district. It could only be on consideration of the clearest necessity that the Government of India could be justified in debarring its successor from obtaining any accession to their resources to meet the ever-increasing wants of an advancing civilization, from the Land Revenue which hitherto has been the mainstay of Indian finance. In order to justify the adoption of so extraordinary a course, the clearest proof of the baneful effects of the present Land Revenue, and the superiority of some other mode of raising an equivalent amount, by taxation, would require to be brought forward. The Land Assessment, be it observed, is not a tax at all, but a share of the rent which the land yields to its possessors. This

\* *Vide* para. 8 of Survey and Settlement Commissioner's letter No.-828, dated 7th October 1867, to the address of the Acting Chief Secretary to Government in the Revenue Department.

share of the Land rent has from the dawn of history formed the great fund from which the expenses of Government in India have been defrayed, and in an agricultural country the land must ever remain the great source of production from which the necessities of Government will have to be supplied. The Government right to increase the Land Assessment is the property of the public, and forms a sacred trust, which, in my humble opinion, the Government for the time being is bound to transmit, unimpaired, to its successors; and I can hardly imagine any accumulation of evidence of the baneful effects of such a possession that would justify the Government in giving it up. So far, however, from such evidence being incontestable, Indian Revenue authorities are nearly unanimous in admitting that of all moves of raising a revenue yet tried in India, the Land Assessment is most popular, and that it would be utterly destructive of the welfare of the country, and indeed absolutely impossible to raise the same amount of revenue by other means. It has been proved incontestably besides in the case of the Bombay districts, that agriculture has improved, and the general prosperity of the country has been developed with as great rapidity as in any other part of India where permanent Settlements have been tried, and it follows therefore that no injurious influence whatever can be fairly attributed to the limitation of the duration of the Survey Settlements to terms of 30 years. This term is long enough to give the landholders confidence in the stability of the Settlement, and yet not too long to render valueless the right of the State to share in the advancing prosperity of the country. In Indapoor we have a case in point. This district may be viewed as an epitomé of India at large, which in its length and breadth is an almost purely agricultural community. In Indapoor at the expiration of the 30 years' Settlement, the Government is about to increase its resources by an addition of upwards of 50 per cent. to the Land Revenue, and with every prospect of this large increase being readily acquiesced in by the landholders, who will not abate by one jot the confidence previously entertained in the stability of their Land Settlement, or view the increase as in any way intrenching upon

their proprietary rights. The advocates then of the permanent Settlements are bound to show that this large additional revenue could be raised from this district by means of taxes which would weigh less heavily upon industry, and be at the same time more acceptable to the people at large. Until this is done, it would, in my humble opinion, be idle to consider the alternative of a permanent Settlement.

(Signed) G. WINGATE.

(True copy)

J. FRANCIS, Lieut. Colonel,  
Survey and Settlement Commissioner.

## MEMORANDUM REGARDING PROPOSALS BY THE GOVERNMENT OF INDIA FOR THE SALE OF WASTE LANDS AND REDEMPTION OF THE LAND REVENUE.

In considering the policy adopted by the Government of India for promoting "the sale of waste lands in fee simple and the redemption of existing land revenue," it will be convenient to treat of the latter branch of the subject in the first instance as that of most importance to the future revenue of India, and an requiring for its elucidation a line of argument that also has an important bearing on the question of selling waste land in fee simple.

2. In the permanently settled districts, the redemption of the land assessment at a proper valuation, and the application of the proceeds to the extinction of a portion of the public debt of India, would leave the financial position of the Government unaltered. And in this point of view the terms upon which the proposed redemption in such districts should be permitted alone require consideration, but those proposed by the Government of India, for fixing the price at twenty years' purchase of the existing assessment, could not fail to operate disadvantageously for the

future revenue, as the process of redemption would in all probability be confined to times when the real value of the equivalent of the annual assessment exceeded twenty years' purchase. This objection would be met by provisions for regulating the capital sum to be paid according to the market price at the time of the Indian Government 4 per cent. rupee paper, on the principles adopted for the conversion of the land tax in England.

3. The general question of encouraging the redemption of the land assessment of India at the present time, even in districts where it is permanently settled, is, however, much more open to criticism. The measure is only suitable for a country in which capital is so abundant that the landholders are unable to devote profitably the whole of their accumulations to the development of the productive capabilities of their land, and are therefore in a position to apply the surplus advantageously in the redemption of the Government or other lines upon it as opportunities may occur. But it is to be feared that this is very far from the condition of India generally, or even of the most flourishing parts of Bengal. The greatest want of India is agricultural capital, and it would be a positive calamity if by any inducements the landholders there could be tempted to withdraw any portion of their inadequate capital from agriculture to be swept into the public treasuries, when, as is admitted, it would not be productive of even financial benefit to the Government. It is not likely that this result will be realized, and more probable that the imagined boon of permitting the redemption of the land assessment will not be appreciated by the landholding class; for it is difficult to understand, when the ordinary rate of interest on agricultural loans varies from 10 to 25 per cent., how it could ever serve the purpose of a landholder to invest his money at 5 per cent. in the redemption of his land assessment. There might be instances of wealthy landholders in Bengal and elsewhere, who have money invested in the public funds, who would be tempted to sell out for the purpose of redeeming their land assessment, but this proceeding would have no effect either in advancing or retarding agricultural improvement. In all cases, however, of landholders applying their accu-

mulations to the cultivation or improvement of their properties, it would be a positive mischief for them to cut off this fertilizing stream from the land, and to turn it into the unproductive waste of the public treasuries. It is little likely that this class of landholders will do so extensively, but, in so far as the redemption may be carried out, it may safely be said that its action will either be valueless or hurtful.

4. The foregoing observations apply equally to districts in which the land assessment is not permanently fixed ; but as regards these, other most important considerations, affecting the development of the public revenues and the general productive resources of the country, require examination. For a permission to redeem the land assessment in those parts of India is equivalent to fixing the existing assessment in perpetuity, as it could not be just to place one landholder in a worse position than another, or after having allowed the redemption of the land assessment in cases too numerous to be deemed exceptional, to declare that landholders who had not been able to redeem should continue liable to have their assessment increased. This would be doubly unjust, for the onerous character of their existing assessment might put it out of their power to redeem it, and this original hardship would thus be the occasion of placing them in a position of permanent inferiority. In order to be just to the whole class of landholders, it would be necessary to fix the existing assessment in perpetuity in all parts of India to which the plan of permitting its redemption is extended, and this consideration gives great importance to the proposals of the Government of India.

5. The late lamented Colonel Baird Smith argued in favour of a permanent settlement of the land assessment in the North-West Provinces, that it would confirm and accelerate the improvement that had resulted from fixing the assessment for terms of 30 years. That may be admitted, and yet the measure might entail disadvantages which would more than counterbalance these anticipated benefits. It should be shown further that an equivalent prospective revenue to that sacrificed by fixing the present land assessment in perpetuity could be more advantageously obtained

in some other form, for it is indisputable that the cost of governing India will be enhanced as the country advances in wealth and civilization, and that a larger and a larger revenue will be needed, as time moves on, to meet the requirements of a more advanced and complicated state of society. It has to be shown that it would be for the general welfare to give up to the land-holding class, without equivalent, the public right to share in any improvement of the land rent that may and must result from the progress of India in wealth and population. A permanent settlement favours the landholder at the expense of the community at large, and the loss to the future revenue that it involves would have to be met by taxation. All arguments in favour of the measure must rest then upon the assumption that a revenue raised from the rent of land presses more heavily upon the industry of a country than an equivalent revenue raised in other ways. And reasons that would suffice to establish the advantage of a permanent settlement of the land assessment would also suffice to establish the advantage of abolishing it altogether. But how stands the case between rent and taxation? Would India really be benefited if the whole or any portion of the public revenue now derived from the rent of land were to be relinquished, and the amount so given up to be raised by taxation instead? This is the real issue, and a most important one it is.

6. In order to arrive at a clear understanding of this important question, the essential distinctions between rent and taxation must be kept in view. Rent, in the estimation of modern economists, results from land varying in fertility and in advantages of situation, which makes it to be of more value in one place than in another. On the more valuable land a greater amount of produce can be raised for the same outlay than on the less valuable land; but as the latter must suffice to remunerate the occupier, the excess of produce yielded by all kinds of land above that of the worst in cultivation constitutes a rent, which can have no influence in enhancing the cost of cultivation, as this is determined by the cost of cultivating the least favourably situated land, which yields no rent. Rent may therefore be received entirely by a landlord,

or be shared between him and other parties in many different ways, without affecting the cost of agricultural production in the slightest degree. For example, in England the rent of land is burdened with payments of various kinds for local rates, interest of mortgages, and private settlements, which diminish the share left for the landlord ; but these burdens do not affect the cost of production at all, which remains exactly what it would have been had the entire rent been received by the landlord.

7. The land assessment of India, when of moderate amount, as in the surveyed districts of the Bombay Presidency, is merely a share of the natural rent that the land must yield when in cultivation, and has therefore no prejudicial influence upon production. And herein consists its distinction from taxation in any form. The latter raises the price of the commodity taxed, and so interferes with its consumption. Taxes upon imports are usually paid by the consumers, and check trade. Taxes upon exports are usually paid by the producers, and also check trade. Taxes upon income, necessaries, or personal expenditure, all tend to diminish consumption and check trade. But a public revenue derived from rent neither enhances prices nor diminishes consumption. The whole result is, that the rent is shared between the Government and the ostensible landlord ; but the rent itself is neither greater nor less than it would have been had this division not existed, so that the productive power of the country remains unaffected. And as the amount of rent constantly increases with the progress of society, without any effort on the part of the landholder, it may justly be looked upon as the natural inheritance of the public, and forms beyond all question a most legitimate fund for contributing to the expenses of government. Mr. J. S. Mill\* observes most justly, "The ordinary progress of a society which increases in wealth is at all times tending to augment the incomes of landholders, to give them both a greater amount and a greater proportion of the wealth of the community, independently of any trouble or outlay incurred by themselves." In India this continually augmenting income has been at all times

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\* "Principles of Political Economy," vol. ii. p. 360. Edition of 1848.

prescriptively subject to a deduction for public purposes, or, in other words, a share of the property in the soil has been reserved by the State. And this state of things being, universally recognized, the land assessment is the most popular of all imposts, and may from time to time be increased, as the country advances in wealth, without risk of giving rise to serious discontent. A landholder in India might complain of his assessment being heavier than he could pay, but he never would dream of contesting the right of the Government to increase it within moderate limits. The land assessment is not only the most productive, but also the most popular, of all the modes of raising revenue in India, and it would be a great mistake to imagine that any scheme of general taxation could be devised as a substitute which would be equally acceptable to the people.

8. It has been argued that, however indisputable the theoretical correctness of the foregoing account of the land assessment of India, the practice of the civilized nations of Europe is against it, and that, as these have advanced in wealth and civilization, they have gradually given up the practice of raising any considerable portion of their revenue from land, and have substituted taxation for the right of the State to a share of the land rent. It would sufficiently account for this, if true, that the governments of Europe have been for the most part in the hands of the landlords; but the assumption that the land of European countries now contributes little to the public revenue will not bear examination. In most of these countries the land tax still forms an important item of the public resources, and is liable to increase without reference to other taxes, and even in England, where the land tax has not varied for upwards of a century, and may be redeemed at an equitable valuation, the land still furnishes the chief resource of local taxation. Tithes and country rates are still in great part paid by the land, and form virtually a charge upon the rent. It appears that the assessment on land levied by county rates in England and Wales in the year 1832-33 amounted to 5,434,890*l.*.\*

\* Papers published by the Board of Trade, vol. iii. p. 34, quoted in Macculloch's "Statistical Account of the British Empire," vol. ii. p. 421.



from which it is evident that even here land still contributes largely towards the expenses of administration, and the position that the land assessment has been given up is seen to be untenable.

9. There is nothing, then, in the practice of the civilized nations of Europe that is condemnatory of the land assessment of India, or militates against the conclusions to be drawn from a scientific comparison of it with other modes of raising an equivalent revenue. It should be compared with the lately introduced income tax and licences on the exercise of trades and professions. Both of these, in the Bombay Presidency at all events, are most unpopular, and have quite failed to answer the expectations at first formed of their productiveness. It was anticipated that they would add half a million sterling to the revenues of the Bombay Presidency, but the actual yield up to the present time is understood to be less than a fourth of that amount. They are besides liable to the objections of being inquisitorial in their operation, and most demoralizing in their influence upon the revenue establishments and the people at large. It is hardly to be expected that either of these taxes, or both of them combined, would yield in the Bombay Presidency as much as may be expected from the increase of the land revenue that might legitimately be made on the expiration of the thirty years' term for which the existing assessment has been fixed at the survey settlements. The superiority of the land assessment to either of the above sources of revenue can hardly be questioned, and under such circumstances can it be wise or expedient to relinquish for ever the right of the State to participate in a general rise of the land rent, and so to compel a resort to modes of taxation which are hateful to the people and injuriously affect industry, as well as retard the development of the resources of the country?

10. It is further worthy of consideration, that future Indian financiers are likely to experience peculiar difficulties in finding substitutes for the gradual increase of the land assessment that is proposed to be given up, through the necessity of their conciliating the public opinion of this country in all their financial arrangements. In this respect the finance of India stands at a great

disadvantage as compared with that of any of the larger colonies of Great Britain. The Finance Minister of an Australian colony or of Canada has only to consider the wishes and interests of his fellow-colonists, and feels himself to be at liberty to tax, and does freely tax, imports from the mother-country, to any extent he may think fit; but the Finance Minister of India must be prepared to encounter a storm of indignation from the manufacturers of this country in attempting to impose import duties upon British manufactures, however much he may deem the measure to be called for with a view only to the interests of India. He will practically be excluded from all sources of income that would injuriously affect the interests of England. At this very time pressure from this country seems about to force the Indian Chancellor of the Exchequer to reduce the duties upon imports by one-half, and an influential party in this country is already agitating for the import and export trade of India being made entirely free. The opium revenue of India is also of doubtful stability, and already opium taxation has been carried to an extreme that leaves little, if any, chance of future increase of revenue from this source. If then the future Indian financier is to be shut out from the prolific resources of the land, customs, and opium, he could only fall back upon direct taxation, with its train of corrupting and demoralizing influences. And it may well be asked, - Would a permanent income tax, ever increasing in proportion to the enlarging expenses of administration, be more desirable than periodical enhancements of the land assessment? And if not, how can it be expedient or justifiable, in the peculiar financial relations subsisting between this country and India, to cut away the land from the limited field of taxation open to the financiers of the latter country?

11. There yet remains for consideration the argument that the impetus that would be given to agriculture by the permanent limitation of the land assessment would be so marvellously great that it would more than compensate the Government and the people for the future loss of revenue which the measure would entail. It may be at once conceded that the establishment of the

land assessment in perpetuity would, in some degree, enhance the value of land, and stimulate correspondingly the energies of the landholder. But its effect in this direction would hardly be perceptible in the surveyed districts of the Bombay Presidency, where the assessment has been fixed at a moderate amount for terms of thirty years, accompanied with arrangements for duly recording all changes in the occupation of land, which have made its possession so secure and its transfer so simple, that the energies of the agriculturists have already been stimulated to a most remarkable extent; and it is probable that more has been done for the development of agricultural production than would have been brought about by an entire remission of the land assessment, unaccompanied by a field survey, to define the limits of properties, and to parcel out the waste into fields of a size convenient for tillage, and each bearing a distinct assessment. "The area and assessment of any field, waste or cultivated, in any surveyed portion of the Bombay Presidency, is at once obtainable by application to the village accountant, and any one wishing to occupy waste land can thus readily obtain every needful information regarding the portion he is desirous of occupying, and is at once placed in possession, upon engaging to pay regularly the assessment placed upon it. This at once enables a cultivator, who has the means of extending his operations, to suit himself with land, and, combined with the privilege of relinquishing at any time any survey field which he may find it inconvenient to continue to cultivate, places him in a position of freedom and security, in regard to the occupation of land, such as is probably enjoyed by no other agriculturist in the world. And the result has been an extension of cultivation in districts where there was a large extent of waste previous to the survey which is perhaps unexampled.

12. The late Colonel Baird Smith, in his Famine Report, observes that, in the surveyed districts of the North-West Provinces, "the latest returns accessible to him show that there is a breadth of culturable and uncultivated land of nearly 8,000,000 acres, being equal to one-third part of its whole present cultivation, and

to about one-sixth part of its total area. Since the existing settlements began a new domain of upwards of 1,000,000 acres has been added to the area of cultivation, and under the additional stimulus of a demand limited for ever, it may fairly be expected, that the growth of this domain will be sensibly increased." It thus appears that about one-eighth part of the culturable waste of the surveyed districts of the North-West Provinces has been brought under tillage since the present revenue assessment was introduced. This is considered to be a satisfactory proof of the success of the settlement, but it is very far short of what has been accomplished in the surveyed districts of the Bombay Presidency under the operation of a field assessment. In the collectorates of the Deccan and Southern Maratha Country, where the proportion of culturable waste to cultivated land, at the introduction of the survey settlements, was about the same as in the North-West Provinces, and where the existing settlements have not upon an average been in operation more than ten years, the cultivation returns would show that a new domain of from two to three millions of acres has been added to the cultivated area under the operation of the field assessment, and that in most of these districts the *whole of the waste*, excepting soils of very inferior quality, has already been brought under tillage. Instead of one-ninth of the waste, as in the North-West Provinces, at least five-sixths of the waste of those parts of the Bombay territory in which the survey settlements have been in operation ten years and upwards have been added to the cultivated domain. And in the province of Khandeish, where the extent of culturable waste, generally covered with jungle, was six times greater than the cultivated area at the commencement of the survey operations, ten years ago, about half a million of acres has been brought into cultivation. A far greater extension of cultivation than the late Colonel Baird Smith ventured to anticipate, as the result of a *permanent* settlement of the land assessment of the North-West Provinces, has been already accomplished, under the operation of the field assessment of the Bombay territories, fixed for terms of thirty years. So remarkable and rapid a development of agricultural industry is almost unexampled in any part of the world, without

aid from immigration; and it cannot in fairness be argued that any further stimulus is needed to extend cultivation over the unappropriated waste. And it is nearly certain that no sensible effect in accelerating the cultivation of waste, or the development of the resources of the soil in other ways, would be produced by fixing the present assessment of the settled parts of the Bombay territories in perpetuity. And in all parts suitable for the production of exportable products, such as the Southern Maratha Country and Khandeish, these are promptly raised to meet the wants of the market, as shown by the rapid growth of the export trade of Bombay. The peasantry are becoming comparatively wealthy, independent, and enterprising, as evidenced by their conducting the greater part of the carrying trade of the country, in addition to their agricultural operations, and by their raising the New Orleans variety of cotton in localities suited for it, and purchasing costly machinery for cleansing it from the seed. It has been, without due consideration, remarked of other parts of the country, and more especially of the collectorates of Poona, Ahmednuggur, Shalapoor, and Sattara, that the cultivators there continue the old round of grain crops, and do not turn their attention to the raising of valuable products suited for export. The observation, however, is most unjust to them, for, with the great populations of Bombay and Poona to feed within easy distance, it so happens that grain crops in the arid climates of those collectorates pay better than cotton or other exportable products, and this is the reason why they are so extensively grown. There, as elsewhere, the ryots raise the crops which they think will pay them best, and they are seldom mistaken in their choice.

13. Property in the soil is just taking root in the surveyed districts of the Bombay Presidency, and the feeling of proprietary right is as surely being fostered and developed under the thirty years' settlements as it would be under a permanent settlement. All that is wanted for this, is security of tenure, moderation in the Government demand, and facilities for transfer, all of which advantages are secured to the occupants of land under the Bombay settlements. The landholders value their possessions more highly than before; but for this very reason, in these purely

agricultural districts, they can rarely be induced to part with them, and in consequence transfers of land are not common. And in parts of the country like Khandeish, where unappropriated waste is readily obtainable on application, it is not to be expected that any considerable price should be given for land already occupied. Owing to these causes, sales of land are comparatively few, and it is probable that many years will yet elapse before any generally recognized understanding as to the saleable value of land becomes current. Sales have been and are being effected for sums varying from one to many years purchase of the assessment, but they are too few and isolated to be used as data for estimating the saleable value of land in the settled districts. The desire, however, of retaining exclusive possession of land is universally strong, and is fast consolidating into a proprietary right, which will be fully perfected in the course of time if the present revenue arrangements be upheld. The example of Tanjore, where a moderate assessment, subjected to little change for many years, has so developed private property in the soil, that land sells for twenty years' purchase of the assessment, is also proof that a permanent limitation of the Government demand is nowise essential to the growth of proprietary rights.

14. There still remains for consideration the possibility of a fall taking place in the value of money, which is perhaps the most important circumstance that bears upon the question of fixing the land assessment in perpetuity. A fall in the value of money is equivalent to a corresponding reduction of the existing assessment, and any considerable fall, say to the extent of 25 per cent., would seriously cripple the resources of the Indian Government. It is true that financial pressure from this cause would be in some degree alleviated through certain of the public charges, such as interest of debt, pensions, railway guarantees, &c., being of a fixed character and not liable to increase in proportion to a fall in the value of money; but if it be supposed that the Government would only suffer to the extent of one-half of the diminution in the value of the land assessment caused by such a fall, the consequences, might be very serious. The loss could not be met by

raising the land assessment, for that is to be fixed for ever, and the consequence would be that taxation in some form would have to be resorted to for making it good.

15. And this consideration is of especial moment at the present time, when such a fall in the value of money is probably going on throughout the world, owing to the vastly greater quantities of the precious metals that have been produced of late years, and is entirely removed from the region of speculation as regards India, where it has been in sure, rapid, and visible operation for a considerable period. The Indian newspapers and periodicals for years past have teemed with complaints of the increased cost of living. Labourers and servants require more wages; house rent is everywhere higher; horses cost more to keep; and in all departments of private expenditure money no longer goes so far as it did. The same is the case with the great staple of agricultural industry. Grain in Bombay and Poona is much dearer than it was ten to fifteen years ago; cotton is at least 100 per cent. higher (accounted for in part by the stoppage of the American supply); oil-seeds and other staples are much enhanced in price. It would be quite within the mark to estimate that prices of agricultural produce are, upon an average, 25 per cent. higher at the present time than they were 15 years ago. And the assessment of the early-settled districts is certainly to that extent lighter than when it was first imposed. This would justify a corresponding increase being made when the current terms of thirty years for which the settlement has been made expire. It is therefore no trifling revenue which the Government of India is now thinking of sacrificing for ever, but an expected increase of 25 per cent. on the land assessment of the Bombay Presidency in the course of the next thirty years. The first of the districts settled was that of Indapoor, which will have been thirty years in operation in four or five years more, and from that time forward one district after another would have to be resettled, and the anticipated improvement in the land revenue would begin to be felt.

16. The remarkable fall taking place in the value of money in India is not wholly due to an increased production of the

precious metals throughout the world of late years, but is also ascribable to an increased demand for Indian staples by foreign countries within the same period, which have been purchased to a large extent with silver. The demand of foreign countries for Indian staples has greatly exceeded the demand of India for foreign productions, and the excess of the former over the latter has necessarily been made up by imports of silver, by which the coinage of India has been largely augmented and also lowered in value. There is no indication as yet of any alteration being likely to take place soon in this peculiar condition of the export and import trade of India, so that the depreciation in the value of money, traceable to it, seems likely to continue for some considerable period.

17. The improvement effected of late years in the internal communications of India has also had no inconsiderable influence in lowering the value of money in the interior. Districts which had no easy communication with the coast had of course little foreign trade. Only valuable commodities, capable of ready transportation, could be exported, and consequently their means of supplying themselves with foreign commodities, and especially with silver, were extremely limited. Owing to this cause, the value of money in such remote localities was always high. Prices of agricultural produce were therefore low, and reductions of the land assessment, by inducing extension of cultivation and increased production, made them still lower, and rendered it more and more difficult for the agriculturist to convert his produce into money. This state of things has been a marked result of the land revenue settlements of the Punjab. But open up such an inland district to foreign commerce by means of railways, roads, or navigable canals or rivers, and silver immediately flows in to purchase the productions which foreigners covet. A greater and greater breadth of the cultivated land, which previously, from the absence of a foreign demand, had been unavoidably devoted to the production of food and other articles suited for internal consumption, is yearly appropriated to the growth of exportable produce, and thus prices rise from two causes—*firstly*, from a



fall in the value of money caused by increased importations of it; and, *secondly*, from a diminished production of grain and other crops suitable for internal consumption.' It may now be readily seen how great must be the effect of improved communications in raising prices of agricultural produce in inland districts, and so enabling the landholders to pay without difficulty an increased assessment. The enhanced value given to land by improved means of transport would be a most important subject for investigation when the existing land revenue settlements expire, and the increased assessment that might then be imposed, in consideration of such improvements, would be a certain and most legitimate return to the State for the public money expended upon, or other aid afforded to such undertakings.

18. It is also to be borne in mind that a first settlement of the land assessment for a term of years can only be justly viewed as experimental, and experience of its working for a series of years is required to ascertain whether it is suitable or not. This remark applies to most of the existing settlements throughout India, exclusive of Bengal, and certainly to all the Revenue Survey Settlements of the Bombay Presidency, none of which have yet run through the thirty years of its first or experimental term, so that even if the principle of fixing the assessment in perpetuity were sound, it would nevertheless be most inexpedient and unwise to give it practical application in the Bombay Presidency until the present settlements have run their course of thirty years and furnished trustworthy data, as well as a fitting opportunity for determining what the permanent assessment should be.

19. The foregoing arguments may serve to show the danger of precipitate action in a matter so important as the land revenue of India, even if they should not be deemed conclusive as to the impolicy of fixing the land assessment in perpetuity. They may be shortly recapitulated as follows :—

1. That the great want of Indian agriculture is capital, and it would therefore be most inexpedient to tempt the landholders to withdraw any portion of their inadequate capital from the land in order to redeem its assessment.

2. That the land assessment of India, when of moderate amount, is a rent-charge, not a tax, and therefore might be increased when the existing settlements expire in proportion to any rise that may have taken place in the value of land from natural causes, without adding to the cost of agricultural production, or burdening the general industry of the country in any way. This could not be said of taxation in any form, and India therefore could not benefit, but must suffer, by every substitution of taxation for the existing or prospective land assessment.
3. That among the civilized nations of Europe the land rent still ranks among the most important sources of the public revenue, and the practice of those nations therefore furnishes no justification for cutting off this resource from the future Governments of India.
4. That it is inexpedient, in the peculiar financial relations of India with England, which allow little freedom of action to the India Governments in dealing with import and export duties, to fetter them still further by depriving them of the power to make the land revenue bear a share of the increased expense of administration that must result from the future progress of India in wealth and population.
5. That the impetus likely to be given to agriculture through fixing the land assessment in perpetuity, beyond what is being given by assessments fixed for terms of thirty years, accompanied by provisions for giving security of tenure and facilities of transfer to the landholder, would be too insignificant to form any sufficient compensation to the Government or to the public for drying up a most ancient, popular, and productive source of revenue, and compelling a resort to taxation to make good the loss.
6. That the future capability of the land of India to bear assessment must steadily increase as the value of money diminishes, under the combined influence of an increas-

ing supply of silver, the progress of population and wealth, and improved means of communication ; and in proportion to this capability would be the loss to be incurred by fixing the assessment permanently at its present standard.

7. That the existing settlements of the land assessments—in the Bombay Presidency at all events—are merely experimental, and are therefore unsuited for being made the basis of a permanent settlement of the land revenue.

20. The proposed regulations for the sale of unappropriated uncleared waste land at a price not exceeding  $2\frac{1}{2}$  rupees per acre, and of waste unencumbered with jungle at a price not exceeding five rupees an acre, might in certain localities be taken advantage of by Europeans for the formation of tea and coffee plantations ; and it is unquestionably most desirable to encourage the formation of such plantations in all suitable localities. And if this important object would be better promoted by the absolute sale of the unappropriated waste, than by its grant at an annual quit-rent for a series of years, the former course should be preferred. But the operation of the plan should be carefully confined to localities suited for the settlement of Europeans, and for the formation, under their superintendence, of valuable plantations, by which the export trade and wealth of the country would be augmented, in order that the undeveloped public property in the waste, which must some day become of great value, may not be sacrificed without an adequate object.

21. The value of waste land for plantation purposes must, even in suitable climates, vary greatly, according to the nature of the soil, command of labour and of markets, and facilities of communication, and it would often happen that the rates at which the waste is proposed to be sold would be far short of a fair equivalent for the public property in the soil to be transferred to the purchaser. In fact the limitation of rates laid down in the 29th paragraph of the Resolution of the Government of India would afford no protection to the public whatever, as it would not prevent a local officer from assigning away the land for ever for a merely nominal

price. The limitation could only operate against the public, never for its protection ; and as it would invest the local authorities with great discretionary power which could hardly be used in the interests of the public, it seems most desirable that any limitation should declare the *minimum*, not the *maximum*, price at which the unappropriated waste may be sold. A better test of the value of the public property which is proposed to be sold would be to put it up to auction at a minimum price, though this plan also is liable to objection as being likely to discourage settlement, for it would be a great disappointment to any intending planter, after having discovered, by laborious and possibly expensive investigation, a suitable locality for his plantation, to lose it after all by some one bidding over his head. This difficulty would be obviated by allowing the planter to obtain his land without resorting to an auction sale, on condition of his paying an annual quit-rent to Government, amounting to 5 per cent. of the minimum price of which it would be put up to auction, for thirty years, when the quit-rent should be subject to revision and increased, as in the case of the survey settlements of the North-Western Provinces and Bombay. It would probably be found that most planters would prefer to hold at an annual quit-rent, so as to be able to reserve all their capital for the cultivation of their estates, while by this plan the public property in the prospective land rent would be preserved intact, and at all events no harm could be done by giving the planters the option of resorting to either of the two modes suggested for obtaining the land they may require.

22. It would be most undesirable, however, to extend the rules for the purchase of waste lands to localities unsuited for European planters, as this would, as already explained, be equivalent to fixing the land assessment in perpetuity, and so deprive the Government and the public of a most promising source of future revenue. The whole Presidency of Bombay (exclusive of Sind) does not perhaps contain a single tract of waste land from which a European could make a living as an agriculturist. Its principal wastes are in the province of Khandeish, and they are for most part of the year pestilential jungles in which a European could

not live. There is no public advantage to be gained in the Bombay Presidency by the introduction of rules framed to meet the requirements of European planters, and it is most certain that these would not avail themselves of them; whereas the existing system is found to be quite suitable for Natives, and is ensuring a more rapid cultivation of the waste than the most successful of British colonies can parallel, while it secures to the public their unquestioned right to share in the future increased value that cannot fail to be given to the lands in question, through the operation of the natural causes which have been already fully described in discussing the policy of fixing the land assessment in perpetuity. The value of the public property in the wastes of Khandeish is enormous. This province, before it was wasted and its population almost exterminated, by repeated inroads of Maratha and Pindarree hordes of plunderers, yielded a public revenue of three-fourths of a million sterling, and so rapid is likely to be its progress under the survey settlement, now that it is brought into direct railway communication with Bombay, that its land revenue may well be doubled in the course of the next thirty years by the cultivation of waste, when that doubled revenue would admit of being further increased on the renewal of the survey settlements. There are extensive tracts of waste in Khandeish which, from the absence of population, are not yet in a condition for detailed survey and assessment, but it would be a monstrous sacrifice of public property to declare these wastes to be saleable for any sums not exceeding  $2\frac{1}{2}$  rupees per acre. The Khandeish husbandmen have added half a million of acres to their cultivated domain in the course of the last ten years, and are steadily advancing upon the jungles around them at a continually accelerating pace. The next ten years may possibly add a million more of acres to their conquest from the jungle, and, as population and wealth increase, their encroachment upon the waste will continue until the whole five millions of acres, at which its extent may be roughly estimated, are brought under their dominion. This is now going on under the operation of field settlements fixed for thirty years, and it may be asked what more remarkable or satisfactory progress could be desired? The future public property

in course of development in the province of Khandeish is enormous, and it would be a grievous error and public misfortune were it to be sacrificed, either by fixing the present land assessment in perpetuity, or by selling the unappropriated waste upon the terms proposed.

23. The proposals of the Government of India for the sale of waste lands in perpetuity, discharged from all prospective demand on account of Land Revenue, may then be pronounced to be quite unsuitable for the Presidency of Bombay, which never has offered, and never will offer, a field for European planters. Europeans may, and it is to be hoped will, locate themselves in the interior, to purchase and prepare cotton and other agricultural products for foreign markets, and their presence there would in all probability be of great advantage to the landholders and to the foreign trade of the Presidency. But as mere agriculturists there is positively no opening for them at all, and the object of encouraging their settlement as planters is too visionary to furnish a shadow of an argument for disturbing a successful land settlement which is securing a rapid extension of cultivation over the waste, while preserving intact the public rights over the undeveloped capabilities of the soil, as the patrimony of future generations.

G. WINGATE.

*Crofton House, Hunts, 2nd May 1862.*

*Revenue Survey and Assessment.*

No. 1211.

## REVENUE DEPARTMENT.

*Bombay Castle, 27th March 1868.*

Memorandum from the Survey and Settlement Commissioner N. D. No. 832H, dated 30th October 1867—Forwarding 16 printed copies of Sir George Wingate's Notes upon his (Colonel Francis') report No. 147, dated 12th February 1867, on the re-settlement of the Indapoor Talooka, and of his letter No. 828, dated 7th October 1867, handing up the same to Government; as also 10 copies, with maps, of the Report above referred to.

RESOLUTION.—The original Report of Colonel Francis containing his proposals for the revision of the settlement of Indapoor was submitted by the Revenue Commissioner S. D. with a memorandum dated 22nd May 1867. This Report gives a very clear account of the circumstances of the Talooka before it was surveyed and settled by the late Mr. Goldsmid and Sir George Wingate, and also of the results of the settlement, which are shown to have been most satisfactory. A copy was at once forwarded to Her Majesty's Secretary of State, but as this is the first of the series now commencing of the revised settlements in the Deccan and Southern Maratha Country, the subject is of unusual importance, and final instructions on the Report were deferred until Colonel Francis should have had an opportunity of consulting Sir George Wingate in England.

2. This has been done, and Colonel Francis has forwarded a memorandum which Sir George Wingate has drawn up. It is most satisfactory to find that the conclusions arrived at in this memorandum correspond so very closely with the proposals which Colonel Francis submitted to Government.

3. Sir George Wingate's suggestions in regard to the more accurate and uniform record of Survey statistics should be attended to. The proposals in Colonel Francis' 4th paragraph founded

thereon should be adopted, with the modification that the Survey Commissioners should consult the Revenue Commissioners before finally submitting the forms for the approval of Government, and should either obtain their consent or explain the reasons of their dissent in any particulars.

4. There can be no doubt but that the local cess should be fixed for the period of settlement, as stated in paragraph 7 of Colonel Francis' memorandum, and the rate of one anna may be adopted as proposed. It will of course be made clear that the right of Government is reserved to impose water rates in the event of irrigational works being constructed.

5. Ordinarily it will not be needful to re-measure and re-classify whole districts as they come under re-settlement; but in districts surveyed during the early years of a newly organized survey these operations must be repeated, and the wisdom of the course adopted by Government and the Legislature in reserving the right has been already proved by the admitted necessity for a new measurement and classification of the district of Indapoor.

6. There is a great deal of force in what Sir George Wingate urges in his 6th to 9th paragraphs about the taxation of improvements. But Government cannot fully coincide in all his conclusions.

7. In regard to special taxation of wells, it is said with truth that water is, like mineral wealth, fairly taxable by the landlord when used by the tenant. His Excellency in Council, however, considers that the first principle of its taxation should be that which governs our taxation of the land itself; that is, the capability of being used rather than the use itself. If water of good quality be easily available near the surface, it is more reasonable to tax such land by a light additional rate, whether the water be used or not, than to lay an oppressively heavy tax on those who expend capital and labour in bringing the water into use. There is, however, a point at which this principle must be modified, for when the land is such that when water is not brought to it it will bear nothing, and when water is used it will yield a fine crop, then even a light tax in the former case is impossible. Of this class



are the sandy tracts in the Conçan, which under the influence of water become cocoanut gardens. It must be held that the right of Government to levy a rate by virtue of the water below the surface is in abeyance, or dormant, till the water is produced, but it is doubted greatly, even in this extreme case, whether it is politic, though it may be asserted to be just, to levy more than would be leviable from first class rice ground, which enjoys also the benefits of water, not created, it is true, by the tenant, but utilized by means of his preparation of the ground.

8. The question of rice fields as compared with dry crop land next naturally arises. The Governor in Council is not prepared at present to concur wholly with Sir George Wingate; for it may be asked whether the adaptability of the soil to rice crops is not sufficiently taken into account if the land when so adapted is treated as first class dry crop land, without adding a special rate because the tenant has expended capital in developing its qualities.

9. But, as stated by Sir George Wingate, this question does not arise here, and it may be reserved for future discussion.

10. And in respect to garden lands it is true that in some districts the difficulty of ascertaining what lands have water capabilities may prevent the adoption of a system that, in lieu of taxing wells specially, taxes all lands capable of producing water with a reasonable amount of trouble. Still Government would advocate the propriety of restricting the demand of Government on well lands to the maximum rate on first class dry crop soils. An extra rate for water capabilities in all districts in which such capabilities may be easily ascertained and recorded might properly be added to the classification, just as a double crop, or other special fertility, is dealt with. But this may not be practicable or expedient everywhere, and in all districts, such as that of Indapoor, in which the garden cultivation is scanty—and it is a great object to encourage it—the best policy is that which Colonel Francis has adopted. It may be difficult to ascertain what lands are capable of producing water, but it is easy to make the maximum for dry crop lands the maximum for well lands also. This course, which His

Excellency the Governor in Council sanctions in the district now under review, will certainly lead to the great increase of well cultivation during the currency of the settlement now about to be made.

11. In regard to Sir George Wingate's remarks in paragraph 9 about a building rate, it may be observed that the Survey Act hardly provides in sufficient detail for the contingency of the increased value of property for building purposes; and it is probable that special legislation will have before long to be resorted to in order to obtain proper sanction for the rules under which the settlement of such lands is now progressing in the larger towns.

12. Sir George Wingate has in his memorandum referred briefly to his views of a permanent settlement. Government consider that his arguments against permanent settlements are thoroughly conclusive, and the present settlement of Indapoor may be taken as an example, on the one hand, of the prosperity attainable under a thirty years' settlement, and on the other of the wasteful sacrifice of revenue involved in a permanent settlement, for had the former settlement been permanent, Government would now have been deprived of an additional revenue of 53 per cent., which the people are ready to pay without the slightest dissatisfaction. If it be alleged that the memorandum written on this subject by Sir George Wingate some years ago is out of date, his remarks in the present memorandum are at any rate fresh and well timed, and they give Government the most recent views of one who has greater experience in the Revenue system of this Presidency than any one alive.

13. The very elaborate details by which Colonel Francis has supported his propositions for the revision of the rates leave no doubt but that he has exercised a very wise discretion in not increasing the assessment further, as he might have done had he been guided solely by the recent prices of produce.

14. An increase of upwards of 50 per cent. is not slight, but it is fully justified by the difference in the circumstances of the district, the increased facilities of communication, and the rise in prices, even taking the average prices much lower than those ruling in the last five years.

15. The Governor in Council therefore confirms the proposed rates for thirty years, and approves, subject to the above remarks, all Colonel Francis' proposals now submitted in these reports.

16. The acknowledgments of Government are due to Colonel Francis for his very clear and elaborate Report.

17. A copy should be sent to Her Majesty's Secretary of State.

To the REVENUE COMMISSIONER N.D.,

REVENUE COMMISSIONER S.D.,

SURVEY & SETTLEMENT COMMISSIONER S.D.,

SURVEY & SETTLEMENT COMMISSIONER N.D.,

} with copy of  
the papers  
on which the  
Resolution is  
passed.

No. 5 of 1868.

REVENUE DEPARTMENT.

*Bombay Castle, 4th April 1868.*

TO HER MAJESTY'S PRINCIPAL SECRETARY  
of STATE for INDIA in COUNCIL, London.

RIGHT HONOURABLE SIR,

With reference to your despatch No. 59, dated the 14th September last, we have

Letter from Lieutenant Colonel Francis, Survey and Settlement Commissioner, No. 828, dated 7th October 1867.

Memorandum by Sir George Wingate, referred to in paragraph 1 of the above.

Memorandum referred to in Colonel Francis' paragraph 8, and Sir George Wingate's paragraph 15.

Government Resolution No. 1211, dated 27th March 1868.

the honour to forward to you the accompanying copy of the papers as per margin, relative to the revision of the Assessment of the Inda-poor Talooka of the Poona Collectorate.

We have the honour to be,

Right Honourable Sir,

Your most obedient, humble Servants,

W. R. SEYMOUR V. FITZGERALD.

B. H. ELLIS.

S. MANSFIELD.

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**PAPERS**

**RELATING TO THE INTRODUCTION OF SETTLEMENT RATES**

**INTO**

**FIFTY-THREE VILLAGES.**

**OF THE**

**KUKKUR TALOOKA**

**OF THE**

**SHIKARPOOR COLLECTORATE,**

**IN THE**

**PROVINCE OF SIND.**



**Bombay:**

**PRINTED FOR GOVERNMENT AT THE  
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**1868.**



No. 92 OF 1867.

REVENUE DEPARTMENT.

FROM THE ACTING SETTLEMENT OFFICER,

Right Bank Districts,

TO THE COLLECTOR OF SHIKARPOOR.

*Settlement Office, Kotree, 11th October 1867.*

SIR,—I have the honour herewith to forward a statement of the results of the Settlement rates introduced into 53 villages of the Kukkur Talooka.

2. I anticipated considerable difficulty in effecting a satisfactory settlement of these villages; owing to their having been visited by frequent floods, from breaches in the Narra and from the river, during the past ten years.

3. As will be seen from the results in the accompanying statement (A), the people of 46 villages took up their land with great readiness; 7 villages, lying on the western bank of the Narra, entered into a combination to refuse the Settlement rates, hoping thereby to force Government to permit a continuance of the former system, namely, yearly measurements, by which the cultivator paid only for such an area as he brought under the plough.

4. The cultivators in these seven villages refused to take up a single acre of their land, and up to the date on which, having completed the Jumwabundy of the other villages, I left Kukkur, they persevered in their refusal.

5. Hearing indirectly that they were feeling uneasy lest their obstinacy should produce results very contrary to their expectations, I left the papers necessary to carry out the Jumwabundy of these



seven villages with Mr. H. G. Watson, Deputy Collector of Mehur, who had assisted me greatly in the Jumwabundy of the other villages, and who was well acquainted with the system to be introduced.

6. After the lapse of some time the zemindars came forward and took up a portion of their land, details of which will be shown separately.

7. At the time of Jumwabundy the cultivators complained of the loss they would sustain were they compelled to take up the numbers which were then lying under water, having been flooded from the breaches made in the Narra during the preceding inundation season; they also represented that if they refused to take these numbers they would, by the terms of the proclamation issued last February, lose all right and title to them.

8. The case appearing to me to be one worthy of consideration, I made it known that, subject to the confirmation of the Commissioner in Sind, all numbers submerged at the time of Jumwabundy need not be taken up by the owners until they were free from water and in a culturable state; and consequently I have had a separate column in the statement accompanying this Report for numbers of this description. I trust that the Commissioner will sanction the measures taken by me, as the cultivators have suffered very greatly from the effects of these floods for many years past, and appear to me to have a claim on the indulgence of Government in this matter.

9. Some of the numbers thus submerged have been taken up by the owners, in the hope of making a profit from the fish and lotus roots which are to be found in them. No opposition was made to their so doing, as the numbers being assessed under the Settlement, and the presence of the water in such quantity being an accident not likely to happen again, I considered that the owners were entitled to the benefit, if there were any.

10. The Jumwabundy of 46 villages out of 53 were completed by me, the results of which are subjoined:—

Area brought under Settlement, not including waste.

Jumma fixed by Settlement.

Acres	G.	Rs.	a.	p.
25,183	20	39,835	3	0

From this the following items must be deducted :—

	Acres	G.	Rs.	a.	p.
Owners absent at the time of } Jumma bundy .....	745	25	1,195	2	0
Submerged at time of Jumma- } bundy .....	729	10	1,236	8	0
	1,474	35	2,432	4	0
	Acres	G.	Rs.	a.	p.
Leaving a balance of .....	23,708	25	*37,802	15	0
Of which were thrown up .....	1,311	5	1,598	4	0
Amount taken up .....	22,394	20	35,801	11	0

11. In addition to the above area, which is land cultivated within the last five years, there are 1,780 acres 35 goontas of land which had formerly been cultivated, but not within the last five years. This area was assessed at Rs. 1,451-15-0, and 1,309 acres 10 goontas, assessed at Rs. 969-13-0, were taken up, thus making a total area of 23,633 acres 10 goontas and an assessment of Rs. 36,629-13-0.

12. These results were beyond my expectations, as I was well aware of the state of the district, and I had been informed that the people felt averse to any change from the old system, which, as it rendered them liable to assessment only on the actual area brought under cultivation, relieved them from the responsibility of their entire holdings.

13. The Jumma bundy of the seven villages on the western bank of the Narra was not so satisfactory. The large area of their

\* Being 95·7 per cent. of the whole.

land under water, 2,027<sup>4</sup> acres 5 goontas out of 7,422 acres, very probably discouraged them, but when they had made up their minds to follow the example of their neighbours it is strange that they should have left so much land to its fate.

14. The area of these villages brought under the Settlement is 7,422 acres, the assessment on which is Rs. 11,381-8-0. After deducting 2,442 acres 15 goontas and Rs. 4,734-12-0 on account of land which was submerged and of which the owners were absent at the time of Jummaundy, we find that the area taken up by the cultivators is only 2,163 acres 8 goontas and Rs. 2,084-12-0, or only 61·5 per cent.

15. The cultivators of Bhungur, Guchul, and Wah Sobdar have thrown up nearly the whole of their land, and I attribute this course on their part to the influence of Mahomed Khan Bhooira, the zemindar of Deh Bhungur, who took a prominent part in the combination at the Jummaundy I carried out before leaving the districts.

16. As stated in paragraph 13, it is difficult to assign a reason for such conduct on their part. It certainly is not from the fact that they were over-assessed, as a glance at the area under cultivation in past years and that assessed by the Settlement shows a considerable increase in the latter, so as to bring the rate per acre much lower than that they usually paid; any uncertainty in their water supply was thereby fully compensated.

17. The villages of Pejaho, Bahadurpoor, Chowbar, and Bego Dero have, on the other hand, taken up every acre which was not under water or of which the owners were not absent, thus rendering the conduct of the other villages still more remarkable, as the risks attendant on cultivation in the latter are not so great as those in the former.

18. The total area taken up in the 53 villages which were brought under the Settlement is 25,743 acres 38 goontas and Rs. 40,720-9-0, and that thrown up is 4,125 acres 15 goontas and Rs. 4,153-13-0.

19. A statement, marked **A**, is appended to this Report, showing in detail those numbers which have hitherto been held under lease, and which are assessed by the Settlement at a higher rate than that which they are obliged to pay according to the terms of the lease. The difference is Rs. 24-5-6 on seven numbers. Until the expiry of the lease the holders will continue to pay at the lower rates.

20. The names of zemindars holding grants of "Seree," with the extent of their grants, and the Survey numbers in which they are situated, are given in Statement **B**: as none of the Seree grants correspond exactly in area with any Survey number held by the grantees, the assessment of the number from which they wish the Seree to be deducted will be diminished by that amount so long as that number is held by the said grantee.

21. In the villages of Guchul and Chowbar the zemindars to whom the Seree was granted have not taken up any of their land. In the case of Guchul I would recommend that the Seree be resumed by Government, as this zemindar is one of those who have combined together to throw up their land *in toto*; but the land of the Chowbar zemindar is under water, and I think it only fair that if he takes up his land during the ensuing cold weather he should be allowed his Seree.

22. There are only 80 $\frac{3}{4}$  acres of Seree grants in these 53 villages.

23. I wish to point out the services rendered by the zemindars of the three villages mentioned below, in persuading the rest, when they were in a state of indecision to take up their land; had they not, both by example and precept, induced confidence in Government, I feel certain that the intrigues set on foot by the zemindars of Bhungur, Bahadurpoor, and the other villages before alluded to by me, would have gone far to defeat the successful introduction of the Settlement. I therefore beg to recommend that the good conduct of these zemindars may be rewarded by a grant of Seree, as specified opposite their names:—

Name of Village.	Name of Zemindar.	Amount of Seree already granted.	Amount now proposed.
Ludda Gadai . . . . .	Wudhia, son of Sobdar Gadhaec.	None.	5 acres.
Khcenro . . . . .	Allahdad, son of Hyatkhan Purrio.	1 acre 20 goontas.	5 acres.
Khat Kolachee . . . .	Mahomed Alli, son of Mirza Kolachee.	None.	5 acres.

24. By this recognition of their services in forwarding the introduction of the Settlement an excellent effect will be produced, and the feeling of distrust and dislike which I have found to exist very generally against this department will disappear, when it is found that Government is disposed to reward those who assist it.

25. In the village of Kukkur a Survey number (127) of 1 acre 15 goontas is held by a fakeer named Nango Shah, son of Becro Shah, who has planted a few trees, some for shade and others for their fruit, and which he irrigates by means of water drawn from the Narra with earthen pots. He has put up a rough shed, under the shade of a large peepul tree, which is kept swept and sprinkled, so as to form a cool shelter for passengers who cross at the ferry close to this number. The fruit, I learn from the Mooktyarkar of Kukkur, is free to any one who chooses to pluck it.

26. In a climate like Sind it is very desirable that every encouragement be given to men who are willing to spend their time in pursuits which are so beneficial to the public, and are also harmless in themselves.

27. As, therefore, this fakeer has a good character, I would recommend that the assessment on this number, amounting to Rs. 2-8-0, be remitted during the life of the present owner, on condition of his continuing to maintain the garden for the use of the public, and that he does not allow it to become a refuge for the idle and dissolute.

28. The village maps and registers of these 53 villages, three copies of each, have been made over to your department.

29. In each register is included a statement of all numbers on which Government water rate is to be levied. The column for the entry of the amount is left blank, but when you determine the rate at which water rate is to be levied it will be easy to fill it in.

I have the honour to be,

Sir,

Your most obedient Servant,

R. R. WALLACE, Major,  
Acting Settlement Officer, Right Bank Districts.

## STATEMENT.

*STATEMENT showing the result of the Settlement Rates when introduced*

No.	Tuppa.	Village.	Last year's Collection.		Area and Assessment brought under the Settlement.		Details of Cultivation			
							Taken up at Jummabundy.		Thrown up at Jummabundy.	
			Acres.	Rs.	A. G.	Rs. a.	A. G.	Rs. a.	A. G.	Rs. a.
1	Khanpoor.	Kukkur .....	384	1,090	827 35	1,144 0	765 10	1,071 11	41 20	64 12
2		Kubber Nangur .....	882	1,870	891 35	1,749 10	876 15	1,720 10	..	....
3		Khanpoor .....	242	572	570 15	876 8	517 30	813 8	51 5	59 12
4		Khatnee .....	580	1,400	1,181 35	1,738 0	1,032 15	1,613 5	61 15	76 0
5		Khurriro Kunoro Lohree.	225	601	746 10	577 14	705 15	545 1	13 15	5 10
6		Cholaree .....	71	165	193 15	259 5	181 30	247 5	11 25	12 0
7		Chubree Meva Gaha ...	206	449	373 30	640 0	373 30	640 0	..	....
8		Chubree Katia .....	284	652	392 15	530 8	388 0	521 4	4 15	9 4
9		Door Mahomed .....	192	540	450 5	615 12	316 10	425 12	127 35	184 12
10		Loolja .....	106	350	448 15	471 0	393 25	428 6	11 10	9 12
11		Khat Lushker Khan ...	112	245	273 20	422 4	219 10	366 4	35 5	37 0
12		Kheenro .....	356	1,048	767 20	1,138 16	661 30	1,015 6	101 20	114 3
13		Chubree Meerkhan Naick	467	1,160	507 35	833 12	507 35	833 12	..	....
14		Jugshee .....	185	551	385 25	544 4	352 25	516 10	30 35	25 8
15		Kullo .....	58	156	186 0	200 7	140 30	165 9	43 10	34 5
16		Drib Talan .....	197	504	333 15	493 0	264 35	398 8	43 20	61 8
17		Jukhro .....	286	698	419 0	660 2	370 25	620 6	41 15	36 8
18		Guddeyr .....	531	1,159	886 25	1,315 12	690 25	1,067 14	56 5	69 8
Total.....			5,364	13,210	9,835 30	14,214 1	8,808 35	12,991 3	679 10	790 6
19	Patre.	Patre .....	142	428	300 10	483 10	300 10	483 10	..	....
20		Wahore .....	326	911	392 10	805 12	392 10	805 12	..	....
21		Kally .....	100	274	129 0	180 4	129 0	180 4	..	....
22		Vee .....	58	160	226 5	230 14	206 15	218 10	9 15	4 8
23		Doobee .....	153	429	278 0	324 2	278 0	324 2	..	....
24		Joong .....	580	1,268	852 35	1,391 4	837 20	1,372 12	15 15	18 8
25		Jampoor .....	30	69	35 5	81 8	35 5	81 8	..	....
26		Beytkhan .....	252	643	143 30	251 8	143 30	251 8	..	....
27		Samoe .....	497	1,405	704 20	1,547 12	700 5	1,539 8	4 15	8 4
28		Drib Wah .....	161	429	297 10	480 0	297 10	480 0	..	....
Total.....			2,299	6,016	3,359 5	5,776 10	3,319 25	5,737 10	29 5	8 14

**A.**—continued.

into the 46 Villages of the Kukkur Talooka mentioned below.

assessed by Settlement.								Waste Numbers.								Total Area and Assessment taken up at Jummabundy.	
Carried away by River or submerged.		Owners absent.		Serec Grants.		Difference between Assessment of Survey Nos. fixed by Settle- ment, and that modified by the terms of the Lease.	Measured and assessed by Settlement.		Taken up at Jummabundy.								
A. G.	Rs. a.	A. G.	Rs. a.	A. G.	Rs. a.		Rs. a.	A. G.	Rs. a.	A. G.	Rs. a.	A. G.	Rs. a.				
..	..	19 25	22 0	1 20	3 4	2 5	29 10	34 14	7 20	8 8	772 30	1,060 3					
..	..	15 20	29 0	..	..	..	..	..	..	..	876 15	1,720 10					
..	..	..	..	1 20	3 4	..	26 5	32 8	26 5	32 8	543 35	846 0					
..	..	33 0	37 8	5 5	11 3	..	60 5	50 8	43 25	33 4	1,126 0	1,646 9					
..	..	27 20	27 3	..	..	..	57 30	13 10	57 30	13 10	763 5	558 11					
..	..	..	..	..	..	..	8 10	5 0	8 10	5 0	190 0	252 5					
..	..	..	..	..	..	..	..	..	..	..	373 80	640 0					
..	..	..	..	..	..	..	..	..	..	..	388 0	521 4					
..	..	4 20	2 0	1 20	3 4	..	..	..	..	..	316 10	425 12					
..	..	42 20	31 0	1 0	1 14	..	59 0	80 4	87 30	41 8	481 15	469 14					
..	..	19 5	19 0	..	..	..	18 5	9 0	..	..	219 10	366 4					
..	..	2 30	6 0	1 20	3 6	..	8 10	9 0	8 10	9 0	670 0	1,024 6					
..	..	..	..	..	..	..	5 0	2 4	5 0	2 4	512 35	836 0					
..	..	..	..	2 5	2 2	..	6 20	4 8	6 20	4 8	359 5	521 2					
..	..	2 0	0 9	..	..	..	..	..	..	..	140 30	165 9					
..	..	20 0	33 0	..	..	..	37 5	34 0	..	..	264 35	398 8					
..	..	7 0	3 4	..	..	..	..	..	..	..	370 25	620 6					
..	..	134 30	181 12	5 5	9 10	..	40 10	55 8	3 20	5 0	694 5	1,072 14					
..	..	328 10	392 4	19 15	37 15	2 5	445 30	331 0	254 10	155 2	9,063 5	13,146 5					
..	..	..	..	..	..	..	..	..	..	..	300 10	453 10					
..	..	..	..	..	..	..	4 20	2 8	4 20	2 8	396 30	808 4					
..	..	..	..	..	..	..	..	..	..	..	129 0	180 4					
..	..	..	..	10 15	7 12	..	123 0	103 14	123 0	103 14	329 15	322 8					
..	..	..	..	..	..	..	73 15	41 12	68 10	38 8	346 10	362 10					
..	..	..	..	..	..	..	4 25	2 8	4 25	2 8	842 5	1,375 4					
..	..	..	..	..	..	..	..	..	..	..	35 5	81 8					
..	..	..	..	..	..	..	..	..	..	..	143 30	251 8					
..	..	..	..	..	..	..	17 20	18 0	17 20	18 0	717 25	1,557 8					
..	..	..	..	..	..	..	242 35	110 1	242 35	110 1	540 5	590 1					
..	..	..	..	10 15	7 12	..	465 35	278 11	460 30	275 7	3,780 15	6,013 1					



## STATEMENT

No.	Tuppa.	Village.	Last year's Collection.		Area and Assessment brought under the Settlement.		Detail of Cultivation			
							Taken up at Jummabundy.		Thrown up at Jummabundy.	
			Acres.	Rs.	A. G.	Rs. a.	A. G.	Rs. a.	A. G.	Rs. a.
29	Kundeechokee.	Kundeechokee .....	241	511	581 20	992 8	325 20	617 14	40 50	70 8
30		Maha .....	285	589	498 15	775 8	400 25	619 15	5 50	8 0
31		Mungria .....	183	397	279 30	472 1	278 0	469 0	1 30	3 0
32		Sheenvero .....	1,467	3,052	1,636 35	2,828 6	1,438 30	2,474 14	15 90	27 0
33		Futtehpoor .....	448	789	1,255 20	1,683 2	850 30	1,111 0	324 25	419 10
34		Beyloabad .....	807	1,965	1,699 35	2,350 15	1,464 15	2,061 15	152 35	163 0
35		Drabee Ludhan .....	790	1,674	877 35	1,656 7	608 10	1,163 6	..	....
Total .....			4,221	8,977	6,839 30	10,748 14	5366 10	8,518 0	539 0	691 2
36	Bahadurpoor.	Chupper Khan Gadahee.	416	1,341	385 25	991 8	347 0	869 9	..	....
37		Futteh Khan Gadahee ..	181	599	184 0	595 4	167 35	559 12	16 5	35 8
38		Doobee Shadee Shikarpe.	491	1,643	628 30	1,430 14	588 5	1,363 15	32 15	31 0
39		Ludho Gadahee .....	572	1,537	800 0	1,617 12	800 0	1,617 0	..	....
40		Cheejapoor .....	930	2,930	1,260 5	2,462 2	1,093 0	2,036 2	18 10	19 0
41		Bowan .....	194	468	383 35	517 2	347 30	470 14	..	....
Total .....			2,784	8,818	3,642 15	7,614 10	3,333 30	6,945 0	66 30	85 8
42	Seeta.	Seeta .....	558	1,321	385 15	336 14	381 10	333 13	..	....
43		Pumbee .....	49	163	62 5	73 4	62 5	73 4	..	....
44		Khat Kolachee .....	189	451	574 5	581 6	573 35	581 2	..	....
45		Nasranee .....	206	622	260 25	337 8	254 0	328 0	..	....
46		Gumbra .....	135	333	224 10	152 0	24 10	152 0	..	....
Total .....			1,137	2,890	1,506 20	1,481 0	1,495 20	1,468 3	..	....
Grand Total .....			15,805	39,911	25,183 20	39,835 8	32,324 0	35,660 0	1,314 5	1,698 4

## A.—continued.

assessed by Settlement.								Waste Numbers.							
Carried away by River or submerged.		Owners absent.		Sere Grants.		Difference between Assessment of Survey Nos. fixed by Settlement, and that modified by the terms of the Lease.	Measured and assessed by Settlement.		Taken up at Jummabundy.		Total Area and Assessment taken up at Jummabundy.				
A. G.	Rs. a.	A. G.	Rs. a.	A. G.	Rs. a.		A. G.	Rs. a.	A. G.	Rs. a.	A. G.	Rs. a.			
193 35	290 8	..	....	2 5	3 10	..	27 10	30 0	..	..	325 20	617 14			
10 25	15 0	81 5	131 0	1 0	1 9	..	32 20	45 8	5 20	7 8	406 5	627 7			
..	..	..	..	..	..	..	..	..	..	..	278 0	469 0			
165 30	290 0	7 0	13 0	10 15	17 12	5 12	62 25	84 0	18 20	19 0	1,452 10	2,493 14			
65 10	87 8	44 35	65 0	..	..	..	28 25	18 0	19 35	11 0	869 38	1,122 0			
21 35	34 0	54 30	82 4	4 10	9 12	..	101 20	84 14	35 0	27 8	1,499 15	2,089 7			
237 15	434 8	29 25	52 8	2 25	5 14	0 3	6 15	11 0	6 15	1 0	614 25	1,174 6			
694 30	1,151 8	217 15	343 12	22 15	38 9	5 15	258 35	273 6	79 20	76 0	5,445 30	8,594 0			
34 20	85 0	..	....	4 5	9 15	..	..	....	..	..	347 0	896 9			
..	..	..	....	..	..	..	..	..	..	..	167 35	559 12			
..	..	..	....	8 10	19 13	16 2	43 15	31 14	16 25	14 4	604 30	1,378 3			
..	..	..	....	..	..	..	3 0	4 0	3 0	4 0	803 0	1,621 12			
..	..	178 35	407 0	..	..	..	232 10	324 8	163 15	236 8	1,240 15	2,272 10			
..	..	34 10	43 0	1 35	3 4	..	0 5	0 2	0 5	0 2	347 35	471 0			
34 20	85 0	195 5	450 0	14 10	33 0	16 2	278 30	360 8	183 5	254 14	3,516 35	7,199 14			
..	..	..	....	4 35	3 1	..	118 30	79 0	118 30	79 0	500 0	412 13			
..	..	..	....	..	..	..	15 20	6 12	15 20	6 12	77 25	80 0			
..	..	0 10	0 4	..	..	..	75 25	49 10	75 25	49 10	649 20	630 12			
..	..	6 25	9 8	..	..	..	15 0	18 8	15 0	18 8	269 0	346 8			
..	..	..	....	..	..	..	106 30	54 8	106 30	54 8	331 0	206 8			
..	..	6 35	9 12	4 5	3 1	..	331 25	208 6	331 25	208 6	1,827 5	1,676 9			
729 10	1,236 8	745 25	1,195 12	70 20	120 5	24 6	1,780 35	1,451 15	1,309 10	969 13	23,633 10	36,629 13			

R. R. WALLACE, Major,  
Acting Settlement Officer, Right Bank Districts.

## STATEMENT

*STATEMENT showing the result of the Settlement Rates when introduced*

No.	Tuppa.	Villages.	Last year's Collection.		Area and Assessment on Cultivation brought under Settlement.		Detail of Cultivation			
							Taken up at Jumwabundy.		Thrown up at Jumwabundy.	
			Acre.	Rs.	A. G.	Rs. a.	A. G.	Rs. a.	A. G.	Rs. a.
1	Bhungur.	Bhungur .....	210	777	787 25	899 0	85 35	110 8	692 35	778 8
2		Pejaho .....	1,206	3,635	1,604 20	2,963 14	792 5	1,583 12	24 30	41 8
3		Gutchel .....	142	475	1,012 10	725 0	23 15	33 0	961 30	744 8
4		Wah Sobdar .....	329	958	1,416 25	1,579 10	229 25	373 8	951 5	761 10
		Total.....	1,878	5,845	4,821 0	6,237 8	1,181 0	2,100 12	2,630 20	2,326 2
5	Bahadurpoor.	Bahadurpoor .....	1,381	4,122	1,580 20	2,948 13	493 12	889 5	180 30	229 7
6		Chowbar .....	196	569	213 10	319 11	119 35	190 11	....	....
7		Bego Dero .....	663	1,974	807 10	1,875 8	419 0	904 0	....	....
		Total.....	2,240	6,665	2,601 0	5,144 0	1,032 8	1,984 0	180 30	229 7
		Grand Total ....	4,118	12,510	7,422 0	11,381 8	2,163 8	4,084 12	2,811 40	2,555 9

**A.**—continued.*into the 7 Villages of the Kukkur Talooka mentioned below.*

assessed by Settlement.								Waste Numbers.				Total Area and Assessment taken up at Jumma-bundy.	
Submerged at time of Jumma-bundy.		Owners Absent.		Serec Grants.		Difference between Assessment of Survey Nos. fixed by Settlement, and that modified by the terms of the Lease.	Measured and assessed by Settlement.		Taken up at Jumma-bundy.				
A. G.	Rs. a.	A. G.	Rs. a.	A. G.	Rs. a.		Rs. a.	A. G.	Rs. a.	A. G.	A. G.	A. G.	Rs. a.
....	....	8 35	10 0	..	..	....	13 35	24 0	..	..	85 35	110 8	
707 35	1,196 2	79 30	142 8	..	..	....	30 30	36 8	14 0	71 0	799 25	1,589 12	
....	....	27 5	17 8	..	..	....	..	..	..	..	23 15	33 0	
167 30	347 8	68 5	97 0	..	..	....	140 10	46 0	..	..	229 25	373 8	
875 25	1,543 10	183 35	267 0	..	..	....	184 35	106 8	14 0	11 0	1,138 20	2,106 12	
733 25	1,526 8	167 25	298 2	5 7	6 7	....	39 5	12 8	..	..	493 13	889 5	
29 25	40 12	63 30	88 4	..	..	....	1 10	0 6	..	..	119 35	190 11	
388 10	971 8	..	..	..	..	....	..	..	..	..	419 0	90 4	
1,151 20	2,537 12	231 15	386 6	5 7	6 7	....	40 15	12 14	..	..	1,032 8	1,984 0	
2,027 5	4,081 6	415 10	663 6	5 7	6 7	....	225 10	119 6	14 0	11 0	2,170 28	4,090 12	

R. R. WALLACE, Major,  
Acting Settlement Officer, Right Bank Districts.

## STATEMENT A.—continued.

STATEMENT showing the difference between the assessment of land held on lease, and that fixed by the Settlement, in 53 villages of the Kukkur Talooka.

Name of Village.	Survey No.	Settlement Jumma.		Portion of Survey Number held in Lease.			Portion of Survey No. in excess of Lease.		Total of Columns 6 and 9 being Assessment now to be levied on Survey Number.	Difference between Assessment of Survey No. fixed by Settlement and that modified by terms of Lease.	
		Acs.	Amount.	Acs.	Assessment according to Lease.	Assessment according to present Settlement.	Acs.	Amount.		Increase.	Decrease.
1	2	3	4	5	6	7	8	9	10	11	12
		A. G.	Rs. a.	A. G.	Rs. a. p.	Rs. a.	A. G.	Rs. a.	Rs. a. p.	Rs.	Rs. a. p.
Kukkur .....	126	2 30	6 0	1 16	0 11 0	3 0	1 15	3 0	3 11 0	..	2 5 0
Drabee Sudhan ..	6	2 15	5 0	1 20	3 0 0	3 1	0 35	1 13	4 13 0	..	0 3 0
Sheen Viro ....	1	3 15	6 0	3 5	1 8 0	5 6	0 10	0 8	2 0 0	..	4 0 0
Ditto .....	61	1 20	2 8	1 20	0 12 0	2 8	....	..	0 12 0	..	1 12 0
Doobee Shadee .	37	4 30	11 8	5 25	5 5 6	11 8	....	..	5 5 6	..	6 2 6
Ditto .....	71	6 5	13 8	5 30	3 0 0	12 9	0 15	0 13	3 13 0	..	9 11 0
Ditto .....	88	0 30	1 14	0 5	0 2 0	0 5	0 25	1 8	1 10 0	..	0 4 0
Total....	27	21 25	46 6	19 0	14 6	6 38 5	3 20	7 10	22 0 6	..*	24 5 6

R. R. WALLACE, Major,  
Acting Settlement Officer, Right Bank Districts.

## STATEMENT B.

STATEMENT showing the Area held in "Seree" with the Names of Grantees, in 53 Villages of the Kukkur Talooka.

Name of Tappa.	Name of Deh.	Name of Grantee.	Survey No. from which taken.	No. of Acres.	Value.	REMARKS.
				Acres. Gts.	Rs. a.	
Bhungur .....	Gachul .....	Wullee Mahomed .....	..	1 1	..	This Zemindar took up none of his land; his "Seree" is not apportioned to him in the Settlement papers.
		Purrio wullud Razoo Purrio .....	59	1 20	3 4	
		Ali Mahomed wullud Kaim Sumeijo .....	18	1 20	3 4	
		Allahdad wullud Hyat Khan Purrio .....	103	1 20	3 6	
		Hazoo wullud Allatuckhia Kalora .....	43	2 5	2 2	
Kukkur .....	Tugshee .....	Chooto wullud Raheemdad Naich .....	54	5 5	11 3	This Zemindar took up none of his land, as it was submerged; his "Seree" therefore was not apportioned in the Settlement papers.
	Khatree .....	Mirza Khan wullud Allahdad Chanda .....	17	5 5	9 10	
	Kadhur .....	Joongul wullud Mewo Depur .....	69	1 0	1 14	
	Loolja .....	Peer Mahomed wullud Kabool Mahomed Kalora .....	23	1 20	3 4	
	Khanpoor .....	Yar Mahomed wullud Lall Mahomed Jooneyjo .....	13	10 15	7 12	
Patr .....	Vee .....	Hashim wullud Moosa Mohana .....	6	2 5	3 10	
		Jindo wullud Ratto .....	26	1 0	1 9	
		Morad Ali wullud Hol Khan Gadahee .....	11	10 15	17 12	
		Hyat Khan wullud Punnah Khan Lagaree .....	5	2 25	6 14	
		Lall Khan wullud Mahomed Khan Chaudia .....	166	6 10	9 12	
Kundeechokee .....	Futteepoor .....	Nutho Shah wullud Lall Shah .....	15	2 20	4 8	
		Alla Obhaya wullud Purriul Sodhur .....	11	4 5	7 3	
		Hot wullud Gazeer Sheik .....	58	4 5	9 16	
		Nubbee Bux wullud Hoosein Khan Gadahee .....	37	4 4	5 9 15	
		Utoor Khan wullud Meandad Chaudia .....	141	5 7	6 7	
Bahadurpoor .....	Bowesar .....	Sirir Khan wullud Mehra Khan Broorgree .....	82	1 35	3 4	
		Gajee Khan Gadahee .....	..	1 22	..	
		Ali Morad Shah wullud Razee Shah .....	20	4 5	3 1	
		Total .....	..	80 30	131 4	
Seeta .....	Seeta .....					

R. R. WALLACE, Major,  
Acting Settlement Officer, Right Bank Districts.

• No. 2761 of 1867.

REVENUE DEPARTMENT.

FROM THE ACTING COLLECTOR OF SHIKARPOOR,

TO THE COMMISSIONER IN SIND. .

*Collector's Office, Shikarpoor, 4th November 1867.*

SIR,—I have the honour to forward herewith in original Major Wallace's Report, regarding the introduction of the Settlement rates into 53 villages of the Kukkur Talooka.

2. On the whole the results of the Settlement are satisfactory, which I attribute to the great pains and care taken by Major Wallace, whose knowledge of the people, and judicious mode of treatment in all real cases of grievance brought to his notice, is remarkable.

3. I am glad to state that the present year's inundation has been favourable; the Narra has been kept within bounds; and the greater part, if not the whole, of the flooded land mentioned in the Settlement Officer's Report is free of water, or will be so shortly.

4. As this year the banks of the Narra will be repaired, and masonry sluices erected at the mouths of all canals, there is but slight probability of any further disastrous flooding in years to come, which if it does occur can be dealt with as a special case.

5. I would therefore recommend that the zemindars on the western bank of the Narra, a great part of whose land was flooded at the time of Jumabundy, be allowed to the 31st of March next to take up their numbers, failing to do which I would enforce the Act in its integrity against them: this I would apply also to the lands mentioned in paragraphs 7 and 8 of Major Wallace's Report.

6.- In reference to paragraph 21 of the Settlement Officer's Report, I have directed the Deputy Collector of Mehur to resume the Seree in the Dehs Guchul and Chowbar, as the numbers in which the grants are situated have been thrown up. In the latter Deh I beg

to be allowed to re-grant the same, should the zemindar take up the number prior to the 31st of March next.

7. I beg most strongly to recommend the grants to the three zemindars mentioned in paragraph 23 of Major Wallace's Report, as I am of opinion such an indulgence will have a most beneficial effect in future Settlement operations.

8. The small yearly remissions recommended in paragraphs 25, 26 and 27 I also approve of, and request your sanction thereto.

9. I purpose fixing, with your approval, the water rate at six annas per acre, the same as is now paid throughout the district.\*

10. In conclusion I am glad to bring to your notice the cordial way in which Mr. Watson coöperated in the introduction of the Settlement into his district, which tended greatly to its success.

I have the honour to be,

Sir,

Your most obedient Servant,

W. A. GILLESPIE, Captain,

Acting Collector of Shikarpoor.

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\* This para. was subsequently modified in the Commissioner's Office as below, as per Collector's letter No. 3095, dated 6th December 1867 :—

“I purpose fixing, with your approval, the water rate at (2) two annas per rupee of assessment, as now fixed for the settled dehs in the Korce Talooka.”



No. 2636 of 1857.

REVENUE DEPARTMENT.

*Commissioner's Office, Hyderabad, 26th November 1867.*

Forwarded to the Survey and Settlement Commissioner for Sind for the favour of his opinion.

W. H. HAVELOCK,  
Acting Commissioner in Sind.

No. 1036 of 1867. •

*Camp, Collian, 20th December 1867.*

The Report shows that in 46 out of the 53 villages included under the Settlement Officer's proposals ninety-five per cent. of the assessed land was taken up at the Jummabundy. The zemindars of the other seven villages refused at first to take up any land whatever; they afterwards changed their minds, and up to the date to which the Report extends had entered into agreements for the cultivation of 61 per cent. of the assessed area of their villages.

2. Major Wallace has dwelt at considerable length upon the conduct of the zemindars of the villages last alluded to refusing to have anything to say to the Settlement. In cases of combined opposition of this kind the only point for consideration is whether there is any reason to doubt the fairness of the rates imposed. We have a satisfactory answer to this in the fact of the same rates being most popular in adjoining villages, and that the opposition was factious in the first instance is proved by the subsequent acceptance of the Settlement for great part of the lands of the villages concerned.

3. The area which has not been taken up is composed chiefly of flooded lands, not at present in a culturable state. The zemin-

dars' objections to take up such lands are not unreasonable, and  
 Para. 8. Major Wallace displayed good judgment in  
 conceding to them the option of not taking  
 them up, "until they are free from water and in a culturable state."

4. The Collector proposes to give the zemindars till the 31st of March only to reflect whether they will take up these flooded lands, and in case of failing to do so would then extinguish their right. It appears, however, to the Survey Commissioner that it is advisable to treat a case like this with more consideration, and to allow the lands to remain free of rent charge, and with the zemindars' right reserved, until reported by a regular inspection (to be made by the district establishment) to be in a culturable state.

5. The questions regarding Serec grants are matters of detail affecting the general revenue administration of the district, upon which the Survey Commissioner does not feel himself called upon to express an opinion.

6. There seems to be no objection to the fakeer being allowed  
 Para. 27. a remission of the assessment upon the small  
 garden alluded to, provided it is kept open to  
 the public as a resting-place for people crossing the ferry.

7. The Collector proposes to fix the Huccaba rate for this district at six annas per acre. But as the plan of calculating this rate upon the assessment has been generally introduced—two annas per rupee being the amount usually set apart for the purpose—the same course might be followed in this case. The Settlement Officer should therefore be requested to adopt this plan, entering the amount in the village register in the manner followed in the other Survey Departments.

8. In conclusion Lieutenant Colonel Francis begs to state that he considers the results of the Settlement to be very satisfactory. Great credit, in his opinion, is due to Major Wallace, not only for the manner in which he has fixed the rates, but for the judgment displayed in his treatment of the zemindars of the district.

J. FRANCIS, Lieut. Colonel,  
 Survey and Settlement Commissioner, N.D.

No. 124 OF 1867.

REVENUE DEPARTMENT.

FROM THE SETTLEMENT OFFICER, Right Bank Districts,

TO THE COMMISSIONER IN SIND.

*Settlement Office, Kotree, 10th December 1867.*

SIR,—I have the honour to request sanction for a temporary Huccaba rate of two annas in the rupee for the Kukkur Talooka of the Shikarpoor Collectorate.

2. No rate was proposed by Major Wallace in his Settlement Report for this district, and no permanent rate can be fixed till other talookas watered by the same canals have been settled.

3. The Survey Commissioner has approved the proposed temporary rate, in his letter to me No. 972 of the 3rd instant, extract from which is appended, and the Collector has suggested two annas in the rupee as a suitable rate, in some Sindhee correspondence on the subject.

I have the honour to be,

Sir,

Your most obedient Servant,

M. R. HAIG, Major,

Settlement Officer, R. B. D.

*Extract of a letter from the Survey and Settlement Commissioner to the address of the Settlement Officer, Right Bank Survey, No. 972, dated 3rd December 1867.*

I have the honour to acknowledge the receipt of your letter of the 27th ultimo, No. 113, relative to the Huccaba rate to be levied in the settled villages of Kukkur Talooka, and in reply beg to inti-

mate that I approve of your suggestion to levy a rate of two annas per rupee of assessment as a temporary measure, pending the settlement of the other talookas which derive their water supply from the same canals as the Kukkur Talooka.

(True extract)

M. R. HAIG, Major,  
Settlement Officer, R. B. D.

(True copy)  
H. ROZARE,  
Assistant Commissioner in Sind.

No. 679 of 1868.

REVENUE DEPARTMENT.

*Commissioner's Office, Kurrachee, 2nd April 1868.*

Submitted for the sanction of Government.

2. Considering the recent disasters by flood in the Kukkur District, to avert which, however, effectual measures, instituted by the late Commissioner, have since been carried out, the result of this Settlement cannot be regarded as otherwise than satisfactory. In submitting the Settlement papers for six tuppas in the Kukkur Talooka with his No. 1085 dated the 9th of May 1867, Mr. Mansfield placed on record his opinion that the Survey and Settlement should not have been introduced into this talooka until the floods had been controlled. It is satisfactory to learn, from the 3rd paragraph of the Collector's forwarding letter, that an improvement has taken place in this respect during the year 1867-68, and from paragraph 4 that the banks of the Narra would be repaired, and masonry sluices erected at the mouths of all the canals.

3. When the recusant zemindars of the seven villages lying on the western bank of the Narra perceive the improvement which has taken place, and which it is hoped will continue, they will, no doubt, gladly take up the numbers which they have thrown up on account of the flood. The Commissioner agrees with Colonel Francis in thinking that Major Wallace displayed good judgment in conceding to these zemindars the option of not taking up land until it is free from water and in a culturable state.

4. The result of the Settlement as shown in Major Wallace's 18th paragraph is—

Acres.	G.		Rs.	a.	p.
25,743	38	taken up .....	Revenue	40,720	9 0
4,125	15	not taken up .....	Revenue	4,153	13 0

5. The subjects alluded to in paragraphs 21 and 23 will be considered departmentally.

6. The small number (127,—1 acre 15 goontas) assessed at Rs. 2-8-0 may be continued free to the fākeer on condition that he continues to shelter passengers crossing the ferry.

7. The Collector will be directed to calculate Huccaba at the rate of two annas per rupee, as recommended by the Survey Commissioner and Settlement Officer, and concurred in by the Collector in a late communication.

8. The one anna cess for Local Funds has been included in the Survey Settlement papers, and will be imposed under Act VIII. of 1865.

9. The Commissioner concurs in the commendation bestowed on Major Wallace by the Survey and Settlement Commissioner.

10. It is requested that fifteen copies of the correspondence may be furnished as soon as it is printed.

W. H. HAVELOCK,  
Commissioner in Sind.

*Revenue Survey and Assessment.*

No. 2077.

REVENUE DEPARTMENT.

*Bombay Castle, 27th May 1868.*

Memorandum from the Commissioner in Sind, No. 679, dated 2nd April 1868—Submitting for sanction a letter from the Collector of Shikarpoor, with its accompanying Report by the Settlement Officer, Right Bank Districts, relative to the result of the Settlement rates introduced into 53 villages of the Kukkur Talooka of that collectorate, together with a memorandum from the Survey and Settlement Commissioner N. D., containing his opinion regarding the above Settlement.

RESOLUTION.—The Settlement appears to have been carried on under some difficulty, owing to the recent disasters by flood in the Kukkur District.

2. In 46 out of the 53 villages included under the Settlement Officer's proposals, 95 per cent. of the assessed land was taken up at the Jumna bundy, and the zemindars of the remaining 7 villages have since entered into agreement for the cultivation of 61 per cent. of the assessed area of their villages. The area which has not been taken, it is reported, is chiefly composed of flooded lands not in a cultivable state.

His Excellency in Council approves of the zemindars being given the option of not taking up the inundated land until free and in a cultivable state.

That of the Settlement in the 53 villages is reported to

be taken up; Revenue Rs. 40,720-9-0.

The Governor in Council views this result

with regret, as the zemindars refuse at present to  
pay the revenue therefrom

Rs. 4,153-13-0. Government concur in the opinion expressed in Colonel Francis' 4th paragraph, that this land should be allowed to remain free of rent charge, and with the zemindars' rights reserved, until reported, after a regular inspection (to be made by the district establishment), to be in a culturable state.

7. His Excellency in Council sanctions the small area of land measuring 1 acre and 15 goontas, and assessed at Rs. 2-8-0, being continued free to the fakeer who holds it, on condition that it is kept open to the public as a resting-place for people crossing the ferry.

8. The instructions which have been issued for calculating the Huccaba at the rate of two annas per rupee are approved.

9. His Excellency in Council concurs in the commendation bestowed on Major Wallace by Colonel Francis and the Commissioner.

10. The whole correspondence should be printed as a Selection from the Government Records.

M. J. SHAW STEWART,  
Acting Chief Secretary to Government.

To

The COMMISSIONER IN SIND.

The SURVEY AND SETTLEMENT COMMISSIONER N.D











